

2017

LOW IMPACT DEVELOPMENT REVIEW AND REVISION SUMMARY



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City of Issaquah 2017 Stormwater Design Manual Addendum

City of Issaquah Ordinance No. 2783

Low Impact Development Code Review Summary

The Western Washington Phase II Municipal Stormwater Permit (Permit) issued by the Department of Ecology (Ecology) regulates many aspects of development permitting for both private and public projects to mitigate impacts of stormwater runoff on Waters of the State. Previously these regulations were largely limited to development standards as specified in the adopted Stormwater Design Manual.

The Permit that Ecology issued in 2012 included a new requirement whereby all regulated jurisdictions must review, revise, and make effective local development related codes, rules, standards, and enforceable documents to incorporate and, where feasible, require LID (Low Impact Stormwater Development). The intent of revisions is to “make LID the preferred and commonly-used stormwater approach”.

While actual development standards requiring LID will still be specified in Stormwater Design Manual, this review is intended to 1) identify gaps in land use development codes that affect LID implementation, 2) remove obstacles to LID in those codes, and 3) allow local jurisdictions to add additional LID code requirements that go beyond the Permit. Review includes the Issaquah Municipal Code (IMC) as well as equally applicable requirements in the Central Issaquah Development and Design Standards (CIDS).

Stormwater Objectives Addressed in LID Code Review:

Many codes throughout the IMC affect how LID is incorporated into, or is affected by, site design and construction. The review of these codes, as summarized below, is evaluated in terms of meeting these three primary LID objectives:

1. Reduce impervious Surface: The most direct way of minimizing stormwater impacts is to reduce the volume of runoff through the reduction of site impervious surface. Examples include narrower road lanes, reduced parking lot sizes, lower impervious surface limits, and shared driveways.
2. Minimize loss of vegetation and soils: Healthy soils and vegetation are essential for infiltration of stormwater on pervious surfaces, including both native soils and landscaping. Examples include retention of native vegetation, minimizing soil and vegetation impacts during construction, and soil amendment requirements for landscaping.
3. Reduce stormwater runoff impacts: Stormwater flow control, water quality treatment, and low impact development (LID) are design to mitigate impacts of stormwater runoff. LID best management practices (BMPs) goes beyond conventional detention/treatment by reducing runoff volumes to help infiltrate stormwater and remove pollutants. Examples include dispersion of runoff into buffers, bioretention (rain gardens), green roofs, and pervious pavement.

Codes Affected:

- IMC 13.28 - Stormwater Management Policy (Table below): The specific development standards for stormwater design, including LID, are in the Stormwater (or Surface Water) Design Manual that is referenced in IMC 13.28. Also affected is IMC 13.30 Stormwater Utility, relating to financial incentives.

- Land use development codes (Table below) that directly or indirectly affect stormwater are contained in many areas of the IMC and CIDDS, including:
 - IMC 16.26 - Clearing and Grading
 - IMC 16.30 - Erosion and Sediment Control
 - IMC 16.04 - Building
 - IMC 18.09 and CIDDS - Parking
 - IMC 12.04 and CIDDS - Street Standards
 - IMC 18.06, 18.07 and CIDDS - Land Use
 - IMC 18.12 and CIDDS - Landscaping and Tree Preservation
 - IMC 18.10 – Critical Areas/Shoreline Management
 - 18.06.130 and 18.10.796-Groundwater Quality Protection Standards
 - Comprehensive Plan
 - Development Agreements

Preliminary Recommendation:

1. Add stormwater policy to emphasize LID as the preferred alternative (as policies come up for review).
2. Major Code Changes:
 - A. Stormwater code must be updated with new Phase 2 Permit requirements. These changes have been known since 2011.
 - B. For other development regulations, no barriers to LID were identified and no major changes are proposed.
3. Minor Code Change examples:
 - A. Consistent soil and native vegetation protection text in Clearing & Grading, TESC, Landscape codes.
 - B. Street Standard details changed to allow reduce street widths and allow LID facilities in ROW, where feasible

Low Impact Development Code Integration Project Team

The following people supported and provided input towards the City of Issaquah's low impact development code review and revision process.

Name	Job Title	Department	Role on Team
Dana Zlateff	Environmental Scientist	Public Works Engineering	Coordinator
Kerry Ritland	Surface Water Manager	Public Works Engineering	IMC 13 Stormwater Code
Tony Nguyen	Engineer	Public Works Engineering	Engineering Standards IMC 10 and IMC 12
Denise Pirolo	Senior Engineer	Development Services Department	IMC 12, 16, and 18 and Development Agreement, engineering standards
Dave Favour	DSD Deputy Director	Development Services Department	IMC 12, 16, and 18 and Dev Agreement; Comp Plan, Central Issaquah Plan
Lucy Sloman	Land Development Manager	Development Services Department	IMC 12, 16, and 18 and Dev Agreement; Comp Plan, Central Issaquah Plan
Christopher Wright	Project Oversight Manager	Development Services Department	IMC 12, 16, and 18 and Dev Agreement; Comp Plan, Central Issaquah Plan
Megan-Curtis Murphy	Sustainability Coordinator	Office of Sustainability	IMC 10 and Reviewer
Trish Heinonen	Policy/Long Range Planning Manager	Development Services Department	IMC 12, 16, and 18 and Dev Agreement; Comp Plan, Central Issaquah Plan
Jennifer Woods	Associate Planner	Development Services Department	IMC 12, 16, and 18 and Dev Agreement; Comp Plan, Central Issaquah Plan
Christen Leeson	Senior Planner	Development Services Department	IMC 12, 16, and 18 and Dev Agreement; Comp Plan, Central Issaquah Plan
Jennifer Fink	Parks Planner	Parks and Recreation	Reviewer
Brian Bernsten	Parks and Recreation Manager	Parks and Recreation	Reviewer
Harvey Walker	Operations Manager	Public Works Operations	Engineering Standards, Reviewer
Mark Lawrence	Assistant Fire Marshall	Eastside Fire and Rescue	IMC 16 Fire Code and Reviewer
Ric Patterson	Parks Division Manager	Parks Maintenance	Reviewer
Wayne Tanaka	City Attorney	N/A	Reviewer

Stormwater and Landuse Code Considerations and Recommendations

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
Stormwater Management Policy IMC Chapter 13.28	13.28.030	<div><input type="checkbox"/> Reduce impervious surface</div> <div><input type="checkbox"/> Minimize loss of vegetation and soils</div> <div><input checked="" type="checkbox"/> Reduce stormwater runoff impacts</div>	Adopted stormwater standards, methods, and procedures for mitigating stormwater impacts at new development are contained in a Stormwater Design Manual that is equivalent to Ecology’s Stormwater Management Manual for Western Washington.	<p>Updated 2014 Ecology Surface Water Management Manual with a City of Issaquah Addendum will contain revisions to incorporate LID design in drainage review, along with associated site planning and BMP selection process, plus other revised standards mandated by Permit (such as elimination of 1 acre threshold). The following summarizes stormwater mitigation that is required for all new developments and redevelopment projects, as reviewed during permitting. Items A & B below are existing, whereas C (LID) is a new requirement under the Permit.</p> <p>A. <u>Mitigate impacts of stormwater runoff on downstream erosion and flooding (existing requirements):</u></p> <p><i>Stormwater detention.</i> Required for projects with >5000 sf of new and replaced impervious surfaces: Post-project runoff must not exceed pre-development forested runoff rate for all storm events >50% of the 2-year event up to the 50-year event</p> <p>B. <u>Mitigate impacts of stormwater runoff on water quality (existing requirements):</u></p> <p><i>Stormwater Treatment.</i> Required for projects with >5000 sf of new and replaced pollution generating impervious surfaces (e.g., roads and parking lots). Under this requirement 91% of annual stormwater runoff volume must be treated (i.e., up to 6-month storm)</p> <p>C. <u>Mitigate low flow and water quality impacts beyond that obtained through conventional detention and treatment (new requirements):</u></p> <p><i>Low Impact Development Standards (aka Onsite Stormwater Management).</i> Required for projects with >2,000 sf of new and replaced impervious surfaces. At least one feasible LID technique in each numbered category in the list below (starting with the first bullet) shall be used. If none are feasible due to site conditions, then no LID is required.</p> <ol style="list-style-type: none">Landscape Areas:<ul style="list-style-type: none">Soil quality and depth (8 inches minimum depth)Roof runoff:<ul style="list-style-type: none">Full Dispersion to vegetated area, or Downspout InfiltrationBioretention (rain garden) – area equal to 5% of rooftopDownspout dispersion – dispersion into vegetated areasPerforated stub-out - gravel trench along pipeOther hard surface runoff:<ul style="list-style-type: none">Full Dispersion to vegetated areaPermeable pavement – parking areas, sidewalks, and on streets having low volume (defined as <400 ADT)Bioretention – area equal to 5% of pavementSheet flow/concentrated flow dispersion – 20-50 ft flow path through vegetation	<p>Required by Permit</p> <p>Add Code Changes:</p> <div><input checked="" type="checkbox"/> Adopt an updated Stormwater Design Manual to incorporate new LID requirements and other standards mandated by Permit.</div> <div><input checked="" type="checkbox"/> Includes a new City Addendum that specified local procedures, standards, and other requirements.</div> <p>Code Currently Allows</p> <div><input checked="" type="checkbox"/> LID design incentives are already allowed by the Stormwater Design Manual.</div>	See City of Issaquah 2017 Stormwater Design Manual Addendum See Ordinance No. 2783

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
		<div><input checked="" type="checkbox"/> Reduce impervious surface</div> <div><input checked="" type="checkbox"/> Minimize loss of vegetation and soils</div> <div><input checked="" type="checkbox"/> Reduce stormwater runoff impacts</div>	Stormwater design incentives to encourage inclusion of LID in development plans	<p>Incorporating LID into stormwater design can result in a reduction of detention and water quality facility sizes and can reduce construction costs by a significant amount, thus saving developers a considerable amount of money. Examples of credits that are allowed by Ecology in their LID modeling guidance include:</p> <ol style="list-style-type: none">1. Pervious pavement is modeled as grass2. Fully dispersed runoff, roof runoff going into dry wells, and rainwater harvesting does not require any flow control or treatment3. Partial dispersion of runoff can get reduction in impervious surfaces4. Newly planted trees can each receive up to 50 sq ft of impervious surface credit.5. Bioretention facilities are modeled as infiltration facilities. <p>Developers must be properly educated to know that these credits are available and understand how they could be applied to their site. Stormwater modeling is a very complex process that many development engineers haven't been trained in, making it necessary for City staff to explain how it can work for their site.</p>		
Stormwater Management Policy IMC Chapter 13.28	13.28.055	<div><input type="checkbox"/> Reduce impervious surface</div> <div><input type="checkbox"/> Minimize loss of vegetation and soils</div> <div><input checked="" type="checkbox"/> Reduce stormwater runoff impacts</div>	Adjustments for low impact development proposals	This section provides administrative adjustments to design standards in the Street Standards and other codes as necessary to allow LID.	Code Currently Allows <div><input checked="" type="checkbox"/> The code as written provides flexibility in the Street Standards and other codes to allow LID.</div>	

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
	13.28.090	<div><input type="checkbox"/> Reduce impervious surface</div> <div><input type="checkbox"/> Minimize loss of vegetation and soils</div> <div><input checked="" type="checkbox"/> Reduce stormwater runoff impacts</div>	Maintenance – private systems (Note: maintenance of public systems is addressed elsewhere in the Permit)	Maintenance of drainage facilities approved by permits is the responsibility of the property owner. The definition of drainage facilities needs to be updated to include LID facilities.	<div>Required by Permit</div> <div>Add Code Changes:</div> <div><div><input checked="" type="checkbox"/> Update definition of “Drainage facility” to include LID elements such as dispersion, infiltration, pervious pavements, bioretention, and rain gardens.</div><div><input checked="" type="checkbox"/> Clarify maintenance/inspection are also applicable to LID facilities.</div></div>	IMC 13.28.020 “ <u>Stormwater facility</u> ” means a <u>constructed component of a stormwater drainage system, designed or constructed to perform a particular function, or multiple functions. Stormwater facilities include, but are not limited to, pipes, swales ditches, culverts, street gutters, detention ponds, retention ponds, constructed wetlands, infiltration devices, catch basins, oil water separators, and biofiltration swales.</u> When used singly or in combination, <u>stormwater facilities</u> reduce the potential for contamination of surface and/or groundwaters. IMC.13.28 130. Authority. <u>The Director is authorized to gain access to private property, make such inspections of drainage stormwater facilities, and take such actions as may be required to enforce the provisions of this chapter.</u>

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
	13.28.100	<input type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Maintenance inspection access, covenants/easements	<p>Ability to access properties for inspections needs to include the requirement for a drainage covenant and easement on the property. This needs to apply to permitted LID facilities in addition to the drainage system stormwater ponds and vaults.</p> <p>City code currently allows the city to enter property and conduct maintenance to correct drainage hazards and bill the property owner for work. It is not recommended that the city conduct any routine maintenance, except under special agreement with owner given special circumstances.</p>	<p>Add Code Changes:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Add language requiring covenant to ensure that the low impact development features are protected and maintained, and easement to allow access for inspections. <input checked="" type="checkbox"/> Include language in covenant that the property owner must inform all future purchasers of the existence and maintenance requirements of the Stormwater BMPs on their property. 	<p>IMC16.26.050 Regulations</p> <p>7. Maintenance</p> <p>a. <u>Prior to issuance of any land disturbing permit, clearing, filling, and grading permit, building permit, or other approval permit that triggers application of this chapter, the Director shall require the applicant to record a declaration of covenants and grant of easement as specified in the Stormwater Design Manual. The restrictions set forth in such covenant shall include, but not be limited to, provisions for notice to the persons holding Title to the property that maintenance and/or repairs are necessary to the facility and a reasonable time limit in which such work is to be completed.</u></p> <p>b. <u>Drainage easements shall be provided in a proposed development for all stormwater conveyance systems that are not located in public rights-of-way or tracts. The drainage easements shall be granted to the parties responsible for providing ongoing maintenance of the systems, and the City for inspections and monitoring.</u></p>
	13.28.030	<input type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Competing Needs- On-site stormwater management BMPs can be superseded or restricted where they are in conflict with special zoning district criteria adopted and being implemented pursuant to a community planning process.	<p>The City is required to meet minimum requirements 1-9 (Appendix I of Permit) and Ecology Stormwater Management Manual to be adopted by the City. On-site stormwater management BMPs are determined feasible for each surface (lawn/landscape, roof, and hard surface) evaluated on design criteria, limitations, and infeasibility criteria for each BMP listed in the Ecology Stormwater Management Manual and Competing Needs Criteria listed in Chapter 5 of Volume V of the Manual.</p> <p>Consider process for evaluating whether the LID requirement has been found to be in conflict with special zoning district criteria adopted and being implemented pursuant to a community planning process, existing local codes may supersede or reduce the LID requirement.</p>	<p>Code Changes:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> LID Feasibility Assessment and Competing needs. Policy regarding Competing needs. 	See Ordinance No. 2783

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
Stormwater Utility IMC Chapter 13.30	13.30.070	<input type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Financial incentives to encourage inclusion of LID in development plans	<p>Financial incentives typically apply to the stormwater utility fee that is assessed on a parcel after a project is built. A stormwater fee reduction is not a direct incentive to developers, however, because only the eventual property owner would benefit. Currently IMC 13.30.070 allows stormwater fee credits for stormwater infiltration. However, very few developments have taken advantage of this credit, as it is hard to meet.</p> <p>Other credits for LID were also considered, such as allowing pervious pavement and other LID facilities to obtain a proportionate reduction in the stormwater utility fee. A related financial incentive relates to the capital facility charge that is assessed on new development to hook up the city's stormwater system. This fee is paid by the developer and is based on the amount of impervious surface on the site. The fee could be reduced by recognizing that LID reduces the effective amount of impervious surface area. Cons of this is handling LID facility when it is passed on to resident or HOA, and ramifications of paving it over or lack of maintenance, the developer had reduced cost for something the was altered by the current use of site.</p> <p>Other considerations include the City providing an incentive, for something that is required. In addition, the City NPDES Phase II Permit requires annual inspection of all newly permitted stormwater facilities and LID stormwater facilities. If stormwater utility fees are reduced for new developments by providing reduced stormwater fees for implementing required LID, the unintended consequence is less funds provided in the stormwater utility to conduct the Permit-required annual stormwater facility maintenance inspections.</p> <p><i>Options Considered:</i></p> <ul style="list-style-type: none">• <i>Revise the stormwater fee credit for infiltration of stormwater, lowering the threshold to make it more attractive.</i>• <i>Owners can receive a credit in the stormwater utility fee for LID facilities (e.g., pervious pavement and green roofs counted as pervious in rate calculation).</i>• <i>Developers can receive a credit for LID facilities in the stormwater capital facility charge (e.g., pervious pavement and green roofs are not counted as impervious surface in the capital facility charge calculation).</i>	<input checked="" type="checkbox"/> No Changes to Code Recommended.	

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
<p>Clearing and Grading IMC Chapter 16.26</p> <p>Erosion and Sediment Control IMC Chapter 16.30</p>	16.26 and 16.30	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Administer grading permits and stormwater site assessment for LID	Clearing and grading and TESC requirements are in two separate IMC chapters and stormwater mitigation is contained in a third chapter. Combining all development regulations into one will improve clarity and consistency.	<p>Add Code Changes:</p> <input checked="" type="checkbox"/> Combine IMC 16.26 and 16.30, plus a portion of IMC 13.28 relating to development mitigation, into single chapter.	<p>See Ordinance No. 2783</p> <p>See City of Issaquah 2017 Stormwater Design Manual Addendum</p>
	16.26.050	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Limit clearing and grading of site before site development is ready to proceed.	Code currently does not allow site clearing at development projects before land use permits are issued.	<p>Required by Permit</p> <input checked="" type="checkbox"/> Retain current restriction that does not allow clearing/grading prior to issuance of land use permits.	
	16.26.050	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Perform stormwater site assessments for LID feasibility early enough in the project design and review to fulfill the intent of low impact development and optimize the use of its techniques.	<p>The Ecology Manual requires a LID feasibility assessment. It is up to the City to determine where this information is required in the planning permit process.</p> <p>Incorporating LID into the land use review process will require that site characteristics are identified early in the development review process. The analysis needed to determine LID application would be performed prior to submittal of a land use permit application to City. With LID, the site planning process will integrate the site assessment findings to produce road and lot configurations that strategically use site features to minimize and isolate impervious surfaces and disperse and infiltrate storm flows. The process requires an initial evaluation that includes criteria in the Ecology Stormwater Manual.</p> <p>Developers typically want to assess the feasibility of a project with as little upfront costs as possible. Currently stormwater evaluations are not performed until a project is well underway and a site plan already established. In order to effectively review a site plan in the context of LID implementation, this will increase up front development time and costs.</p> <p>City Review & Coordination Procedures –As part of the stormwater site plan (Technical Information Report), staff will evaluate the data and make determinations of the site’s feasibility for LID and what best management practices will achieve LID standards for the proposed development. The process may evaluate the feasibility of possible outcomes such as seasonal restrictions, phasing and sequencing restrictions may be placed on clearing and grading activities to reduce the amount of disturbed soil, no compaction in areas need for infiltration, reduction in turbid runoff and in areas located near steep slopes or unstable soil.</p> <p>Submittal Requirement Checklists –Checklists of materials required to evaluate for LID feasibility submitted for approval of a development. A new checklist, or revisions to some of the City’s existing checklists, would be needed to address the LID feasibility requirements.</p>	<p>LID Feasibility Assessment Required by Permit</p> <p>Add Code Change:</p> <input checked="" type="checkbox"/> LID Site Feasibility Assessments will be required to be submitted prior to land use permit application submittal such as at the Pre-Application Meeting phase. Construction (clearing and grading) would not be allowed until stormwater and LID feasibility assessment has been completed. <p>Non-Code Changes:</p> <input checked="" type="checkbox"/> Update internal review procedures, and Submittal Requirements.	<p>IMC 16.26.050 Regulations</p> <p><u>1. Rough Grading</u></p> <p>f. <u>Preliminary stormwater plan including stormwater technical information report with low impact development feasibility assessment are submitted.</u></p> <p>IMC 16.26.060 Application-Review</p> <p><u>A. Submittal requirements for permits that authorize clearing, grading, and stormwater facilities can be obtained from the Permit Center, the City’s website, or via the City’s online permit submittal portal. Permit applications shall provide required information including the type of submittals, the required level of detail, and the minimum qualifications of preparers of technical documents including the following:</u></p> <p><u>1. A stormwater technical report and LID feasibility assessment shall be submitted with the preapplication meeting submittal, or if no such meeting is required, then such report shall be submitted prior to or with land use permit submittal (for example, site development permit, preliminary plat, short plat).</u></p>

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
	16.26.050	<div><input type="checkbox"/> Reduce impervious surface</div> <div><input checked="" type="checkbox"/> Minimize loss of vegetation and soils</div> <div><input type="checkbox"/> Reduce stormwater runoff impacts</div>	Emphasize minimizing site disturbance, protect existing infiltration, and protecting native vegetation and soils	The Landscape Code currently specifies requirements for preserving existing vegetation and minimizing disturbance of soils within a development site. To ensure that grading plan review addresses these requirements, the C&G Code should incorporate those requirements (native soil protection and retention, soil porosity, and soil amending), emphasizing avoidance of impacts to the extent possible.	Add Code Change: Update the IMC 16.26 Clearing and Grading Code to incorporate the soil protection requirements contained in IMC 18.12 landscaping code.	16.26.040 Permit Required <u>A. Permit Required: Any land disturbing activity that involves clearing, grading, or creation or modification of a stormwater management facility requires approved plans and permit(s), unless such activity is determined to be exempt from obtaining a permit as provided below. Activity requiring a permit is authorized under a site work permit, building permit, landscaping permit, or as a component of any other permit that authorizes land disturbance if City-approved drawings and associated technical reports for such activities are included under the other permit.</u> 16.26.050 Regulations 2. Clearing b. Except where clearing is permitted under <u>IMC 16.26.040(B)(12) “Exemptions”</u> , no clearing shall be allowed in <u>any protected areas including</u> an environmentally critical area, <u>native growth protection easement, protected trees, greenbelt, open areas, or areas of native vegetation within the development site that are not part of the development proposal</u> , without a Permit and such other approvals as may be required by the Issaquah Municipal Code. 4. Temporary Erosion and Sediment Control <u>f. Areas of disturbed soil that include lawn and landscape areas shall meet post-construction soil quality and depth per the Stormwater Design Manual and detailed in IMC 18.12.140 (P) and (Q), Landscape Code.</u>

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	16.26.060	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Show areas of protected native vegetation and soils on plans	Design drawings do not identify areas where native vegetation and soils are to be retained undisturbed, except as they relate to protected areas (significant trees and critical areas).	Add Code Change: Update IMC 16.26 similar to IMC 18.12.040 to require plans to show native vegetation and soil preservation areas with the property (to match TESC and landscaping plans).	16.26.050 Regulations 2. Clearing c.i. <u>Protective fencing with temporary signs shall be installed around all environmentally critical areas (including streams, wetlands, steep slopes and their respective buffers), native growth protection easements (NGPE's), protected trees, greenbelt, open areas, or areas of native vegetation within the development site that are not part of the development proposal.</u> Design and location of the protective signs shall be approved by the Director.
	16.26.050 and 16.30.050	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Emphasize minimizing site disturbance, protect existing infiltration, and protecting native vegetation and soils through clear and grading permits and stormwater site assessment for LID	Code is unclear on how “early clearing and grading” can be allowed after that point and before construction plan review has been completed. For example, a site may require demolition, pre-loading, utility undergrounding, frontage improvements or other work well in advance of constructing the final development project. Such activities could be allowed if stormwater facility design report has been advanced or near final design and the early clearing and grading will not result in loss of opportunity for incorporating LID in the site design.	Add Code Change: Rough clear and grade permit allowed for special conditions to begin clearing and grading activities, after all land use permit approvals. Includes preliminary stormwater plan including technical report with LID feasibility assessment.	16.26.050 Regulations C.1. <u>Rough Grading. The Director may issue a permit for a rough grading project when all the following criteria have been met:</u> <u>a. All land use permits are issued.</u> <u>b. Other agency permits are issued if required (e.g., Hydraulic Project Approval).</u> <u>c. Site plan including conceptual utility layout.</u> <u>d. SEPA review for the entire project is completed (if required).</u> <u>e. Clearing, grading and temporary erosion control construction plans are submitted.</u> <u>f. Preliminary stormwater plan including stormwater technical information report with low impact development feasibility assessment are submitted</u> <u>g. Resolution of all project feasibility issues (i.e. required off-site easements and improvements, significant utility design issues etc.) as determined by the Director.</u> <u>h. For work to be authorized during a Land Use Permit appeal period, all conditions of IMC 18.04.260 Permit Issuance Prior to Expiration of the Appeal Period, are met.</u>
Building Code IMC Chapter 16.04		<input type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Allowances for rooftop stormwater structures Minimal Excavation Foundations	Rooftop stormwater structures, such as tanks to store stormwater for reuse, are currently allowed by code.	Code Currently Allows: <input checked="" type="checkbox"/> The code as it currently exists allows for this.	

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
		<input type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Allow bioretention areas, swales, cisterns near building foundations	Locating LID near buildings is not prohibited by building codes, but is evaluated during plan review to ensure proper design considering foundation soil conditions.	Code Currently Allows: <input checked="" type="checkbox"/> The code as it currently exists allows for this.	
Parking Code IMC Chapter 18.09 and Central Issaquah Development and Design Standards (CIDDS) Chapters 8 & 15	IMC 18.09.050 & CIDDS Ch. 8	<input checked="" type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Reduce the amount of impervious surface area on a development site by reducing parking ratios.	The surface area of parking lots is measured as part of the land use impervious surface limits. Currently there are processes in place to reduce parking in instances of shared parking or through a transportation demand study. While not necessarily resulting in a reduction of total impervious surface area at a development site, it would reduce pollution generating surfaces and possibly greater green space.	Code Currently Allows: <input checked="" type="checkbox"/> The codes as they currently exist allow for this.	
	IMC 18.09.060 & CIDDS Ch. 8 & 15	<input checked="" type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Reduce the amount of impervious surface area by allowing for shared parking arrangements	Shared parking between different uses within the same development or between two different developments is an available option in the IMC and Central Issaquah Standards.	Code Currently Allows: <input checked="" type="checkbox"/> The codes as they currently exist allow for this.	
	IMC 18.09.050 & CIDDS Ch. 8	<input checked="" type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Reduce the amount of impervious surface area by establishing maximum parking requirements	<p>IMC currently sets minimum parking requirements, but does not specify maximum parking requirements. Central Issaquah Standards, which cover most of the City’s commercial/office areas, have a maximum and a minimum parking requirement.</p> <p>The city has increasingly seen that more applicants are requesting to use the standard that requires the least parking, following Central Issaquah standards, even outside of the CIDDS area.</p> <p>Discussions have occurred to adopt maximum and minimum parking requirements City-wide, perhaps adopting a format similar to Central Issaquah Parking Standards. The Olde Town Task Force recommends reducing parking requirements by adopting the Central Issaquah parking standards in CBD/Olde Town.</p> <p><i>Options Considered:</i></p> <ul style="list-style-type: none"><input type="checkbox"/> Consider maximum parking requirements as part of the Olde Town Design Plan and Standards update.<input type="checkbox"/> Adopt remaining City areas following Olde Town action.<input type="checkbox"/> Adopt minimum and maximum parking standards City-wide (except Development Agreements).	<input checked="" type="checkbox"/> No Changes to Code Recommended.	

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
	IMC 18.09.050 & CIDDS Ch. 8 & 15	<input checked="" type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Reduce the amount of impervious surface area by reducing parking lot sizes: <ul style="list-style-type: none"> Allow/encourage multi-level parking Reduce parking stall dimensions Use vegetation for parking area screening instead of fences 	<p>Multi-level parking: IMC and CIDDS allow multi-level parking. Central Issaquah Standard incentivizes and in some instances requires structured parking and disincentivizes surface parking.</p> <p>In the Central area structured parking is incentivized as surface parking is an inefficient use of space (and \$) on property that has 80 – 95% impervious coverage allowance and no setbacks. In the rest of the City, multi-level is also allowed, however the CIDDS incentives don't exist. There is very little commercial land that would warrant surface parking (with the exception of single family developments) and most proposals received by the city now include underbuilding parking.</p> <p>Parking stall dimensions: can already be reduced in a number of ways in both the IMC and Central Issaquah Standards.</p> <p>Surface parking landscape screens: in interior parking lot plantings with trees are required by both the Central Issaquah Standards and the IMC. The Central Issaquah Standard specifically encourages surface parking lots to utilize “pervious pavement, low impact stormwater development elements such as rain gardens and other effective and innovative sustainability measures.”</p>	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> The codes as they currently exist allow for this.	
Street Standards IMC Chapter 12.04	Street Standards and CIDDS Ch. 12	<input checked="" type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Reduce the amount of impervious surface area by reducing street widths	<p>Options for reducing the amount of impervious surface area includes:</p> <ul style="list-style-type: none"> Reduce street lane widths to less than 11-foot standard, conforming to Central Issaquah Standards 10-foot standard. However, urban street design is dictated by relatively narrow ROW widths that determine a required street section. Staff have the ability to modify width on case-by-case basis. Additionally Central Issaquah Standard says that vehicular routes should be designed with minimal paving. Impervious surface can be reduced using a street section that doesn't include curb and gutter, replaced by a drainage swale that can include LID. Cul-de-sacs require a lot of pavement, unless a landscape island is included. They are prohibited in the Central Issaquah Standards (unless special circumstances prevail). Require site design to evaluate how the length of proposed streets can be minimized. Reference permeable pavement allowance in roads and sidewalks, per the Surface Water Design Manual requirements. <p>Review concluded that Central Standard 6.2.D “Block Length” does not achieve the goal of reducing impervious: Decreasing the street length, by adding an additional Pedestrian Circulation Facility every 300 feet is a great idea but doesn't reduce impervious surface, in fact it adds impervious.</p> <p>Central Standards 6.2.G “No Cul-de-Sacs. <i>Cul-de-sacs are prohibited unless special circumstances relating to the topography, location or surrounding of the subject property or right-of-way that impose an undue hardship on the project applicant are present.</i></p>	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> No changes are needed in Street Standard to allow reduced lane widths. Already allowed. <p>Non-Code Changes:</p> <input checked="" type="checkbox"/> Add 10-foot width in standard details. <input checked="" type="checkbox"/> Add cul-de-sac standard details.	

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
	Street Standards and CIDDS Ch. 12	<input checked="" type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Allow LID facilities within ROW	<p>Stormwater runoff can be retained within the ROW to improve infiltration and pollutant removal before it enters the stormwater system and leaves the site. The Street Standards don't identify this in the standard details, but also don't prohibit it. Clarification to standard details can include:</p> <ul style="list-style-type: none"> Allow LID street features to receive runoff in ROW (e.g., rain gardens) Allow curb cuts and roadside ditches as alternative to curb/gutter with piped stormwater. However, this has limited applicability in new and redevelopment due to small ROW widths and requirements for sidewalks. <p>Maintenance of bioretention facilities can also be made more efficient if a standard design is followed throughout the city.</p>	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> Street Standards allow LID. <p>Non-Code Changes:</p> <input checked="" type="checkbox"/> Update standard details in Street Standards and Central Issaquah Standards to specifically allow LID stormwater facilities within ROW. <input checked="" type="checkbox"/> Add standard detail to Street Standards for bioretention design in ROW (landscape strip or other ROW areas) that is also compatible with Central Issaquah Standards Streets.	
Land Use IMC Chapter 18.06 & 18.07 & CIDDS Ch. 4, 7, 13, 15	IMC 18.07.110 & CIDDS Ch. 4	<input type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Allow rain barrels within standard zoning area setbacks	<p>Central Issaquah Standards: The Central standards do not restrict rain barrels from any setback.</p> <p>IMC: In the rest of the city, they are not allowed in the front side or rear yard setback, unless they are less than 54" tall and then may be located in the side and arear yard setback; this requirement is effective in single family residential areas and there aren't a lot of those in Central Issaquah. Written property agreement allows a rain barrel in the side and rear yard setback. Beyond these flexible standards, an Adjustment of Standards may also be applied to locate the rain barrel within any of the setbacks.</p> <p>Consider future updates to IMC to make process easier could be proposed in the future as part of general code updates.</p>	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> The codes as they currently exist allow for this.	
	IMC 18.07.380, 390, and 440 & CIDDS Ch. 7 & 13	<input checked="" type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Reduce the amount of impervious surface area by increasing open space requirements	<p>Open space is required in most areas of the City, some may be allowed to be impervious, but there are pervious surface requirements in all zones, too.</p> <p>Central Issaquah Standards: A combination of pervious and impervious Community Spaces are required throughout Central area (Community Space 7.0) for Residential and Non-Residential. A minimum amount of pervious is required in each zone.</p> <p>IMC: Required for multi-family and shopping center development in the rest of the City – may be impervious or pervious. A minimum amount of pervious is required in each zone.</p> <p>All critical areas and buffers are required to be set aside as open space.</p>	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> The codes as they currently exist allow for this.	

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
	IMC 18.07.420	<input checked="" type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Reduce the amount of impervious surface area by clustering development	<p>Central Issaquah Standards: The Central Plan is essentially one big cluster development by focusing and clustering urban development to this area in exchange for preserving existing, more pervious neighborhoods outside the Central Area. The standards have incorporated key cluster provisions by allowing 0’ setbacks and no minimum lot size.</p> <p>IMC: in the rest of the City clustering is allowed and is incentivized for residential development with critical areas through a density transfer from critical areas to buildable areas and a separate Cluster Development code. The Cluster housing standards, IMC 18.07.420, is allowed for sites of at least 2 acres.</p>	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> The codes as they currently exist allow for this.	
	CIDDS Ch. 12	<input checked="" type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Reduce the amount of impervious surface area by allowing shared driveways	<p>Central Issaquah Standards: requires shared driveways where practical.</p> <p>IMC: shared driveways not prohibited and are commonly used by development, especially for duplex/multifamily projects. It is noted that shared driveways are typically not preferred in single family residential projects due to maintenance issues and potential use conflicts between property owners.</p> <p>Street Standards require separated driveways, but variance process to share driveways.</p>	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> The codes as they currently exist allow for this.	
	18.07.360 & CIDDS Ch. 15	<input checked="" type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Reduce the amount of impervious surface area by reducing zoning impervious surface ratios - general	<p>Central Issaquah Standards: Impervious ranges from 80% - 95% maximum. This relatively high impervious ratio resulted from the Central Issaquah Plan’s vision to focus planned future growth and development to this area in exchange for preserving existing, less impervious areas elsewhere in the City.</p> <p>IMC: Impervious ranges from 10% - 85% maximum. Most zones outside CBD zone are residential having 50% or less impervious surface ratio. Reducing these ratios further to achieve LID goals is not needed because LID can already be accommodated.</p> <p>The Old Town Task Force recommends creating incentives for redevelopment in downtown Issaquah. They recommend increasing the impervious surface allowance in the CBD, similar to CIDDS. Impervious surface limits in Olde Town Update will be evaluated during upcoming public process, with emphasis on LID goals.</p> <p>Required pervious areas shall include the following areas in order of priority:</p> <ol style="list-style-type: none"> 1. Critical areas that require buffers; 2. Existing significant tree(s) or tree stands; 3. Native vegetation areas. 	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> No code changes proposed with this process, but will be discussed with the Olde Town Design Standards update and should be considered during that process.	

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
	18.07.360	<input checked="" type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Allow pervious pavers or pavement to be considered “pervious” in the impervious surface ratio, thereby increasing the use of LID (but decreasing other green space).	<p>IMC and Central Issaquah Standards: “Pervious pavement or pavers” are currently not defined as pervious in the pervious/impervious surface ratio definition - instead they are considered a hard, impervious surface.</p> <p>Pervious pavement will be required where feasible by the Stormwater Design Manual such as sidewalks, parking lots, patios. It would desirable to have a consistent requirement in the Land Use Code and Central Issaquah Standards.</p> <p>Central Issaquah Standards allows up to 5% additional impervious surface (except for the zones of UV, DF, SF-S, UC) subject to meeting the Administrative Adjustment of Standards (AAS) approval criteria. The use of pervious pavers is not required but could be a deciding factor in meeting the AAS approval criteria. The impervious surface ratio increase may support achieving the density planned for Central Issaquah.</p> <p>However, if a similar 5% additional allowance is adopted City-wide (except DA’s) in the lower density areas, this could result in an unintended consequence of reducing the amount of total vegetated green, pervious space. Alternatively, if the Stormwater Manual will require pervious pavement where feasible, then the Land Use Code and Central Issaquah Standards could be amended to require the same, without a 5% impervious surface increase.</p> <p><i>Options Considered:</i></p> <ul style="list-style-type: none"><input type="checkbox"/> IMC and CIDSS changes to require pervious pavement where feasible (consistent with the Stormwater Manual) without an additional 5% impervious surface allowance.<input type="checkbox"/> IMC change to allow an additional 5% impervious surface only if it’s LID and is part of the stormwater system.<input type="checkbox"/> IMC and CIDDS code changes to “Pervious” to allow a certain percentage of pervious pavement to be defined as “Pervious” to place it in the same category as green space.	<p>Add Code Change:</p> <p><input checked="" type="checkbox"/> Amend Land Use Code and Central Issaquah Standards to note that pervious pavers or pavement may be required by the Stormwater Code to provide LID functions, however pervious pavers or pavement continue to be defined as impervious.</p> <p>Codes to amend:</p> <p>IMC 18.02.110 Definitions – I “Impervious”</p> <p>MC 18.07.050.B “Use of Pervious Areas”</p> <p>Central Standards 2.0 Definitions “Impervious”</p>	See Ordinance No. 2783
Landscaping and Tree Preservation COI Street Standards	IMC 18.12.140 P,Q,R	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Healthy soils	IMC and Central Issaquah Standards: already conform to current design requirements for native soil protection and retention, soil porosity, and soil amending. However, these requirements should be added to Clearing and Grading/TESC codes to ensure review is conducted as part of Site Work Permit, since it is easily missed.	<p>Code Currently Allows:</p> <p><input checked="" type="checkbox"/> No changes required in Land Use Code or Central Issaquah Standards</p>	

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
IMC Chapter 18.12	COI Street Standards & IMC 18.12.150 CIDDS 10.3.A	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Use of green stormwater LID BMPs to meet street tree planting requirements	<p>IMC and Central Issaquah Standards: Both codes require sufficient street frontage landscaping on the public and private lands along streets. However the specific codes vary. Both codes rely on general planting details discussed elsewhere that incorporate some elements of LID BMP's, however the requirements may vary by code and may need updating and consistency. Ensure street frontage landscaping requirements include LID and allows dual uses of those areas for both landscaping and stormwater management</p> <p>IMC and Central Issaquah Standards: Provide for street tree placement and planting details. Street tree planting locations and spacing may be modified by the sight line setback in the City's Street Standards.</p> <p>Street Standards: Obsolete planting specifications are also located in the City's Street Standards. The street tree selection and design guidelines do not particularly encourage or require LID with street tree plantings. Consider allowing certain practices to receive partial or full stormwater credit for tree planting requirements.</p>	<p>Non-Code Changes:</p> <input checked="" type="checkbox"/> Update Street Standards details to allow stormwater LID (as noted above). Update typical planting, soil porosity, soil amendments, tree location, shrub and groundcover plantings (refer to Landscape Standard Details L-01 through L-05). <input checked="" type="checkbox"/> Update approved street tree lists to include appropriate stormwater LID trees.	
	CIDDS Ch. 16	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Use of green stormwater LID BMPs to meet landscaping requirements	<p>Central Issaquah Standards: requires stormwater facilities to be integrated with and complementary to adjacent landscaping though does not provide pervious credit. LID is a consideration.</p> <p>IMC: Landscape code allows for LID techniques.</p>	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> No changes required. The codes as they currently exist allow for this.	
	IMC 18.12.1370 - 1390	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Tree Preservation	<p>IMC and Central Issaquah Standards: addresses retention adequately. Retention requirements were recently updated, and require minimum tree density of 2-4 significant trees per 5000 sq ft of developable site area. Tree removal is also regulated.</p>	<p>Code Currently Allows:</p> <input checked="" type="checkbox"/> No changes required. The codes as they currently exist allow for this.	

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
	IMC 18.12.100 & CIDD Ch. 10	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Landscaping in parking lots	<p>Central Issaquah Standards: In the Central area, shading pavement is a requirement and does not discourage the use of LID techniques; landscape screening is also required.</p> <p>IMC: In the rest of the City, parking lot trees and visual screens are required, although property owners not always allow trees to grow to maturity.</p>	<p>Code Currently Allows:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> No changes required for requiring landscaping. The codes as they currently exist allow for this. <p>Add Code Change:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Add requirements that landscape trees be maintained to allow them to grow to maturity, replace dead or diseased trees, etc. 	<p>Future code updates:</p> <p>18.12.140 Landscape Standards and specifications</p> <p>N. Tree and Vegetation Protection: In order to provide adequate protection of trees and the landscaping area, the landscape design shall comply with the following standards:</p> <p>3. Trees shall be sized appropriately, <u>allowed to grow to full maturity without pruning</u>, and not be placed in areas where they will require excessive pruning (greater than twenty-five (25) percent of the canopy) such as in the sight line of project sign locations.</p>
	IMC 18.12.100 – 105 & CIDD Ch. 10 & 16	<input type="checkbox"/> Reduce impervious surface <input checked="" type="checkbox"/> Minimize loss of vegetation and soils <input type="checkbox"/> Reduce stormwater runoff impacts	Vegetation screening in lieu of walls and berms	<p>Screening is currently required for all parking areas and the use of vegetation is an option as are walls and berms.</p> <p>Central Issaquah Standards: In Central Issaquah, development receives pervious credit for any landscaped area; however, where urban development is proposed to take up 80 – 95% of a property, there may not be adequate room for in ground landscaping. Additionally, the Central Landscape Standards recommends using green walls to soften and green urban areas, especially in narrow constrained planter areas to add structure, depth and interest to walls, outdoor spaces and planter areas.</p> <p>IMC: In the rest of the City, pervious surface requirements allow for green walls. Additionally, the landscape screening requirements <i>are</i> sight obscuring green walls.</p>	<p>Code Currently Allows:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The codes as they currently exist allow for this. 	
Critical Areas/Shoreline Management IMC Chapter 18.10	IMC 18.10.775	<input type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Allowance of LID BMPs in critical area buffers when compatible	<p>Code currently allows regional stormwater facilities to be located in outer 25% of Class 2, 3 and 4 stream buffers. It also allows discharge of stormwater into buffers. Code can be modified to encourage use of LID BMPs in areas where topography or soil conditions would otherwise not allow it.</p> <p>The stream and wetland buffer CAO will be revised to update stormwater management definitions, incorporate all Classes of streams, and clarify that stormwater facilities may be placed in the outer 25% of buffers if they are vegetated (excludes pervious pavement, green roofs and non-vegetated vaults).</p>	<p>Add Code Change:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Allow stormwater and LID facilities to be located in outer 25% of buffers. Clarify excludes hard surface stormwater facilities. 	See Ordinance No. 2783

IMC Code	IMC Section	Stormwater Objectives Addressed	Topic	Considerations	Recommendations	New Code
	IMC 18.10.775	<input type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Allowance of LID BMPs in critical area buffers when compatible	Assess whether native vegetation associated with LID BMPs can be used to meet buffer enhancement requirements.	Add Code Change: <input checked="" type="checkbox"/> Allow bioretention and rain gardens to meet buffer enhancement requirements if use native vegetation.	See Ordinance No. 2783
Groundwater Quality Protection Standards IMC Chapter 18.06.130 and 18.10.796	IMC 18.10.130 and IMC 18.10.796	<input type="checkbox"/> Reduce impervious surface <input type="checkbox"/> Minimize loss of vegetation and soils <input checked="" type="checkbox"/> Reduce stormwater runoff impacts	Restrictions within CARA Class 1 that are more stringent than stormwater feasibility criteria.	<p>Any proposed uses within the CARA that have the potential to degrade water quality in the CARA maybe prohibited or conditioned as established in 18.10.796.</p> <p>The City may require Groundwater Monitoring Plan/Hydrogeologic Assessment Report for New Developments. There is no barrier to LID BMPs, but there is flexibility based on risk associated with land use type to prohibit use or activity in the CARA on case by case basis.</p> <p>The codes as they currently exist allow for flexibility in CARA, Stormwater Manual, and competing needs assessment.</p> <p><i>Option Considered:</i></p> <p><i>Add pervious pavement restrictions within the CARA Class 1 more than the Stormwater Manual feasibility (ex, commercial parking lots, arterials where risk of spills greater)</i></p>	<input checked="" type="checkbox"/> No Changes to Code Recommended.	



2017 Stormwater Design Manual Addendum

**(When combined with the Department of Ecology 2014
Stormwater Management Manual for Western
Washington is the adopted City of Issaquah “Stormwater
Design Manual”)**

Prepared by:

City of Issaquah Public Works Engineering Department

Adopted by the City Council

November 7, 2016

Ordinance No. 2783

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ATTACHMENTS

- Attachment 1. Ordinance 2783 Adopting Stormwater Manual
- Attachment 2. IMC Chapter 16.26. Clearing, Grading and Stormwater Management
- Attachment 3. Stormwater Standard Details and Approved Materials

CHAPTER 1. INTRODUCTION

1.1 GENERAL REQUIREMENTS

The City of Issaquah adopted through Ordinance 2783 (included as Attachment 1) the Washington Department of Ecology (Ecology) 2014 Stormwater Management Manual for Western Washington (SWMMWW) for the design, construction and maintenance of stormwater management systems and facilities that are approved through the development permitting process. This document, the City of Issaquah 2016 Stormwater Design Manual Addendum (Addendum), is also adopted and in combination these two documents are referred to as the ***Stormwater Design Manual***. These requirements are codified in Issaquah Municipal Code (IMC) Chapter 16.26, Clearing, Grading, and Stormwater Management (included as Attachment 2).

The 2014 Stormwater Management Manual for Western Washington is available on Ecology's website (Ecology Publication Number 14-10-055):

<http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>.

The requirements contained in this Addendum are intended to match Appendix I of the 2013-2018 NPDES Western Washington Phase II Municipal Stormwater Permit. This Addendum also contains City permit submittal, review, and approval requirements, and specific design standards and details approved by the City of Issaquah.

1.1.1 Stormwater Management Objectives

The intent of the adoption of the Stormwater Design Manual is to comply with the thresholds, definitions, minimum requirements and exceptions, adjustment and variance criteria in Appendix I of the NPDES Western Washington Phase II Municipal Stormwater Permit (Phase 2 Permit). The Phase II Permit dictates the stormwater development standards for over 80 cities and counties in Western Washington, and these standards are implemented through Ecology-approved technical guidance manuals.

1.1.2 New Requirements for 2016

In general, these are the most significant new requirements for 2016:

- New technical manual. The City adopts the Stormwater Design Manual, based on Ecology's 2014 Stormwater Management Manual for Western Washington, replacing the previously adopted 2009 King County Surface Water Design Manual.
- Elimination of the 1 acre threshold. Previously the City retained this threshold from earlier King County manuals because this was allowed by the Phase II Permit. This exemption was eliminated in Ecology's 2013-2018 Phase II Permit.
- Low Impact Development (LID). Significant changes to LID requirements were incorporated into the Phase II Permit, and are included in Minimum Requirement #5: On-Site Stormwater Management.

1.1.3 Significant Differences between Ecology and Issaquah Requirements

While most of Ecology's 2014 SWMMWW is applicable to the City of Issaquah, several significant differences are contained in this Addendum and through other City requirements for development permitting, including (but not limited to):

- Central Issaquah Area Alternative Flow Control Standard, identified in Table 1-1 and described in Section 2.2.4 and shown on Figure 2-5, modifies the flow control standard in the valley floor area of downtown Issaquah by allowing existing land use to be assumed for the pre-developed condition.
- The Central Issaquah Area Seasonally Saturated Soil Assumption can be used in valley floor areas whether site investigations demonstrate that the site contained seasonally saturated soils and thus can be modeled as wetlands (see Section 2.2.5).
- The City's turbidity standard in construction runoff is 100 NTUs up to the 10-year/24-hour storm event for all projects involving clearing and grading (see Section 1.2.5).
- The Development Services Department conducts stormwater review. Permit applications are submitted online through www.MyBuildingPermit.com (see Section 1.4.1).
- Submittal requirements specific to City of Issaquah requirements have been developed and are available on the City's website and through the online permitting portal. City of Issaquah standard details, notes and materials are also referenced (see Section 1.4.3).

1.1.4 Interpretation of Conflicting Standards

Users of this Addendum shall refer to Appendix I of the Phase II Permit, along with associated references in the SWMMWW, to help interpret the requirements of this Addendum, should any discrepancies or questions be found in this Addendum. This interpretation shall not affect City standards contained herein or in IMC Chapter 16.26 that are intended to meet the minimum requirements of the Phase II Permit.

1.1.5 Projects Vested under Previous Manuals

This manual does not impact stormwater requirements for development projects that were permitted and vested to certain standards under previously adopted King County Surface Water Design Manuals. Those projects are still able to apply those appropriately vested standards. However, submittal procedures contained in this 2016 Addendum and technical guidance contained in the Stormwater Design Manual can be used in conjunction with those earlier standards.

1.2 REQUIREMENTS

1.2.1 Screening and Project Review

Table 1-1 is a summary of the different project types requiring drainage review. This is a project screening tool that is based on Figures 2.3 and 2.4 that is used only to determine which minimum requirements a project may be subject to. The actual criteria are in the Minimum Requirements, as applied to each threshold discharge area separately (see next section).

1.2.2 Flow Control and Water Quality BMPs

The Stormwater Design Manual contains the technical guidance on measures necessary to control the quantity and quality of stormwater. This is done through application of the minimum requirements and Best Management Practices (BMPs).

Tables 1-2 and 1-3 are summaries of required flow control and water quality treatment BMP requirements. These summaries are intended to inform applicants of the major stormwater requirements to help scoping of detailed project design. Please refer to Chapter 2 of this Addendum and the Stormwater Design Manual for specific requirements for these and other minimum requirements that must be followed during design. Sites that can fully infiltrate or disperse are not required to provide additional runoff treatment or flow control facilities.

Table 1-1 PROJECT SCREENING FOR STORMWATER REVIEW							
Project Type ^b	Screening Thresholds ^a			Minimum Requirements ^a			
	Hard Surfaces		Land Clearing	MR #1-5	MR #6-9	Stormwater Facility Target Surfaces ^d	Pre-Dev Cond.
1. TESC Only	<2000 SF new plus replaced hard surfaces	or	<7000 SF land disturbance	MR #2 – Construction Stormwater Pollution Prevention Plan			
2. New Development – All projects^c	2000-5000 SF new plus replaced hard surfaces	or	7000-32,670 SF land disturbance	✓		--	--
	>5000 SF new plus replaced hard surfaces	or	>32,670 SF land disturbance	✓	✓	<u>New and replaced</u> hard surfaces	Forested
3a. Redevelopment - Value of proposed improvements is <50% of value of existing site improvements^c	2000-5000 SF new plus replaced hard surfaces	or	7000-32,670 SF land disturbance	✓		--	--
	>5000 SF new plus replaced hard surfaces	or	>32,670 SF land disturbance	✓	✓	<u>New</u> hard surfaces only	Forested
3b. Redevelopment - Value of proposed improvements is >50% of value of existing site improvements^c	2000-5000 SF new plus replaced hard surfaces	or	7000-32,670 SF land disturbance	✓		--	--
	>5000 SF new plus replaced hard surfaces	or	>32,670 SF land disturbance	✓	✓	<u>New and replaced</u> hard surfaces	Forested
4a. Transportation redevelopment - New hard surfaces add <50% to existing hard surfaces	2000-5000 SF new plus replaced hard surfaces	or	7000-32,670 SF land disturbance	✓		--	--
	>5000 SF new plus replaced hard surfaces	or	>32,670 SF land disturbance	✓	✓	<u>New</u> hard surfaces only	Forested
4b. Transportation redevelopment - New hard surfaces add >50% to existing hard surfaces	2000-5000 SF new plus replaced hard surfaces	or	7000-32,670 SF land disturbance	✓		--	--
	>5000 SF new plus replaced hard surfaces	or	>32,670 SF land disturbance	✓	✓	<u>New and replaced</u> hard surfaces	Forested
5. Central Issaquah Alternative Flow Control Area (see Figure 2-5) – All projects	2000-5000 SF new plus replaced hard surfaces	or	7000-32,670 SF land disturbance	✓		--	--
	>5000 SF new plus replaced hard surfaces	or	>32,670 SF land disturbance	✓	✓	<u>New</u> hard surfaces only	Existing

^aSee Chapter 2 for requirements, following the flow charts in Figures 2-4 and 2-4 and referring to Minimum Requirements for specific criteria.

^bSee Chapter 2.1 for additional exemptions.

^cNew Development are sites with <35% existing impervious coverage; Redevelopment are sites with >35% existing impervious coverage.

^dStormwater Facility Target Surfaces: for flow control and water quality treatment. Onsite Stormwater BMPs required under MR #5.

TABLE 1-2 REQUIREMENTS FOR WATER QUALITY (MR #6)

Thresholds	<ul style="list-style-type: none"> Required for projects with new or replaced <i>pollution generating hard surface</i> > 5000 sf and for <i>pollution generating pervious surface</i> >3/4 ac. (see Target Surface definition under project type). Oil control is required for high use sites
Standards	<ul style="list-style-type: none"> Phosphorus treatment is required for projects discharging to streams. Enhanced treatment for certain land uses and oil control for high use sites. Pretreatment or Basic treatment is required prior to infiltration.
Surfaces	Pollution generating hard surfaces and pollution generating pervious surface (e.g., landscaping, turf fields, etc.)
Facility types	See Section 1.2.2.3 and Table 1-4. Treatment systems must be sized for the entire flow draining to the facility, not just additional areas added as part of a redevelopment project.

TABLE 1-3 REQUIREMENTS FLOW CONTROL (MR #7)

Threshold	<p>Evaluate projects with >5000 sf of new and/or replaced impervious surface to determine which of these criteria apply:</p> <ul style="list-style-type: none"> All sites with <i>Total effective impervious surface</i> >10,000 sf, or >3/4 acres of vegetation converted to lawn or landscape, or Increase in the 100-year discharge compared to pre-project condition is 0.10 or 0.15 cfs (depending on WWHM model time step used). <p><i>Note: thresholds apply separately to each threshold discharge area</i></p>
Standard	Match developed discharge durations to pre-developed duration for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow (i.e., "Level 2").
Target Surfaces	See Table 1-1 for summary, as further described in Chapter 2, to determine whether target surfaces include new or new plus replaced hard surfaces.
Pre-Developed Assumption	<p>Depends on project type and location (see Fig. 2.3 and 2.4):</p> <ul style="list-style-type: none"> New Development (>35% existing impervious): Forested Redevelopment (>35% existing impervious): Existing Central Issaquah Area Alternative Flow Control Standard (new and redevelopment): Existing
Soils	<p>Soil type shall be assumed to be existing site conditions, except as follows:</p> <ul style="list-style-type: none"> <u>Saturated pre-development soils</u> can be assumed if applicants can demonstrate through a soil investigation that the site was historically (i.e., prior to European settlement) seasonally saturated.
Facility types	Flow control can be achieved through any combination of engineered facilities (e.g., stormwater pond or vault), infiltration to groundwater, and stormwater LID techniques.
Exemptions	Direct discharge to Lake Sammamish is exempt from flow control requirements, assuming the conveyance system is designed to accommodate the design peak discharge under full build-out condition for the local drainage area.

1.2.2.1 Hydrologic Analysis (Approved Model)

The Approved Model for hydrologic analysis is the Western Washington Hydrology Model (WWHM2012 or subsequent versions). This software can be obtained at this Ecology website:

<http://www.ecy.wa.gov/programs/wq/stormwater/wwhmtraining/index.html>

Commercial versions of WWHM, obtained through Clear Creek Solutions, are also accepted and provide added functionality compared to the public domain WWHM version.

1.2.2.2 Hydraulic Analysis and Conveyance System Design

Small projects generally do not require hydraulic analysis of pipe systems. For larger projects the hydraulic analysis procedures contained in the Stormwater Design Manual must be followed.

Regardless of whether hydraulic modeling is needed, conveyance systems must be design in accordance with the criteria in Stormwater Design Manual. City of Issaquah Standard Details for materials and construction must be followed for facilities to be owned and maintained by the City. All facilities shall be designed to be accessible for inspection and maintenance (e.g., access roads).

1.2.2.3 Water Quality Treatment Options

Table 1-4 summarizes water quality treatment options. Water quality treatment devices approved by Ecology under the Technology Assessment Protocol - Ecology (TAPE) program are approved for use in the City of Issaquah. In addition:

- All discharges to streams shall assume phosphorus treatment.
- Facilities to be dedicated to be owned and maintained by the City must be on Approved Materials List.
- Only General Use Level Designation (GULD) treatment technologies are allowed. In cases where GULD approval is imminent from Ecology, or the device will be used in a retrofit project not subject to development regulations, the City may conditionally allow Conditional Use Level Designation (CULD) devices if allowed by the manufacturer.
- All TAPE-approved treatment devices must be selected in accordance with their intended use: pretreatment, oil treatment, basic treatment, enhanced treatment, phosphorus treatment, and construction sites. Design must follow the TAPE approvals

for pretreatment, hydraulic profile, design treatment flow rates, flow bypass, and other criteria.

Table 1-4 lists GULD-approved technologies for pre-treatment, basic, enhance, and phosphorus treatment. This list is also contained in the Approved Materials List and will be updated periodically. Basic treatment and pre-treatment is used prior to infiltration or as part of treatment train (see design manual).

TABLE 1-4 WATER QUALITY TREATMENT OPTIONS				
Product	Pre-Treat	Basic	Enhanced	Phosp.
EMERGING TECHNOLOGIES				
AquaShield Aqua-Swirl System	X			
Baysaver BayFilter®		X		
Contech CDS™ Stormwater Treatment System	X			
WSDOT Compost-Amended Biofiltration Swale		X	X	
Hydro International Downstream Defender	X			
Watertechtonics ecoStorm plus		X		
Contech Filterra® Bioscape™		X	X	X
Contech Filterra® System		X	X	X
Oldcastle FloGard Perk Filter®		X		X
WSDOT Media Filter Drain		X	X	X
Contech Media Filtration System		X		
Bio Clean Environmental MWS-Linear Modular Wetland		X	X	X
Imbrium Systems Stormceptor	X			
Contech StormFilter -PhosphoSorb Media at 1.67 gpm/sq ft		X		X
Contech Stormfilter using ZPG Media		X		
Contech Vortechs System	X			
STORMWATER DESIGN MANUAL				
Infiltration (with pretreatment)		X	X	X
Large sand filter ¹		X	X	X
Large wet pond		X		X
Two-facility treatment train (see manual) ²		X	X	X

¹Private development only. Sand filters not accepted as a City-owned facility.

²Requires basic or linear sand filter as part of the treatment train, also not accepted as a City-owned facility.

1.2.3 On-Site Stormwater BMPs (Low Impact Development BMPs)

On-site stormwater management BMPs (SWMMWW Minimum Requirement #5), also known as stormwater Low Impact Development (LID), provide for stormwater treatment and flow control using methods that infiltrate, disperse, and retain stormwater runoff on-site. The requirement for Stormwater LID is in addition to conventional stormwater detention and treatment facilities. However, if designed appropriately and used extensively, stormwater LID can reduce the size or potentially eliminate the need for those conventional facilities.

Stormwater LID is defined by Ecology as a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation, and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design. Examples of stormwater LID include flow dispersion, bioretention, rain gardens, and permeable pavement.

Stormwater LID is required where found to be feasible for each of these three categories of stormwater runoff as summarized in Table 1-5. Each of the three surfaces is evaluated separately for LID feasibility, with the first techniques in each list that is found to be feasible must be implemented. Multiple BMPs may be required, such as a combination of full dispersion and rain gardens, to meet the full on-site stormwater BMP. If no LID technique is feasible, either singularly or in combination, then no LID is required for that category.

This analysis requires an in-depth analysis of site conditions in terms of onsite characteristics: soil, depth to seasonally high groundwater, geology and slope stability, topography, and others. Certain offsite characteristics also need evaluation, such as location of adjacent structures that could be adversely affected. Feasibility shall be determined by evaluation against:

1. Design criteria, limitations and infeasibility criteria identified for each on-site stormwater management BMP in Chapter 5 Volume V of the Stormwater Design Manual; and
2. Competing needs criteria listed in Chapter 5 Volume V of the Stormwater Design Manual.

TABLE 1-5 REQUIREMENTS FOR ON-SITE STORMWATER BMPs (MR#5)

Surface	How Evaluated	BMPs to be Evaluated for Feasibility		General Criteria ^a
		Projects that trigger MR#1-MR#5	Projects that Trigger MR#6-MR#9	
Lawn/ Landscaped Areas	Required in all projects.	1. Post-Construction Soil Quality and Depth (BMP T5.13; IMC 18.12.140)		De-compact and add topsoil meeting pH and organic criteria to depth of 8 inches.
Roofs	Use BMPs that are determined to be feasible, evaluated in order listed, until full BMP criteria is met.	2a. Full Dispersion (BMP T5.30), <u>or</u> Downspout Full Infiltration Systems (BMP T5.10A).		Full dispersion requires large native growth area: 6.5 times area of roof draining to it. Downspout infiltration requires less area but is subject to soil conditions.
		2b. Rain Gardens (BMP T5.14A), <u>or</u> Bioretention.	Same as MR#1-MR#5 except Bioretention in place of rain gardens.	Area of rain garden or bioretention to be 5% of roof area draining to it, at depth of 6-12 inches. Bioretention adds engineering criteria on design infiltration rate.
		2c. Downspout Dispersion Systems (BMP T5.10B)		Used if dispersion area is moderate (25-50 ft length) using splash blocks or gravel-filled trenches
		2d. Perforated Stub-out Connections (BMP T5.10C)		Used if dispersion area is minimal (<25 ft length) using perforated pipe in 24" wide gravel trench
Other Hard Surfaces (e.g., parking lots, sidewalks)	Use BMPs that are determined to be feasible, evaluated in order listed, until full BMP criteria is met.	3a. Full Dispersion (BMP T5.30)		Full Dispersion: see #2a above.
		3b. Permeable pavement (BMP T5.15), <u>or</u> Rain Gardens (BMP T5.14A)	Same as MR#1-MR#5 except Bioretention in place of rain gardens.	Permeable pavement: All surfaces, except high use, roads >400 ADT, and other infeasibility criteria. Rain gardens/bioretention: see #2b above.
		3c. Sheet Flow Dispersion (BMP T5.12), or Concentrated Flow Dispersion (BMP T5.11)		Sheet flow: min 10 ft or larger vegetated buffer next to parking lot or road. Concentrated flow dispersion requires 50 ft flow path and is limited to 700 sf of hard surface.

^a This is a generalized summary only, and does not reflect the BMP infeasibility criteria or competing needs assessment that may apply to the project and site. See BMP sheets in Ecology Manual for complete criteria.

1.2.4 Source Control BMPs

Stormwater source control BMPs (SWMMWW Minimum Requirement #3) focus on preventing stormwater pollution from occurring at its source, as opposed to treatment BMPs that attempt to reduce pollution in stormwater flows after the water is contaminated (i.e., "end of pipe" treatment).

Source control BMPs cover a wide spectrum of activities, both structural and operational that are applied to the entire site to reduce or prevent pollution in stormwater. These measures address pollution prevention at their source, by using practices such as specific design requirements to prevent non-stormwater discharges from entering the stormwater drainage system, good housekeeping, spill prevention, hazardous material containment, and pre-treatment measures.

All projects (but typically commercial, industrial, and multifamily) undergoing drainage review are required to implement applicable source controls. The City may, however, require mandatory source controls at any time through formal code enforcement if complaints, inspections, or studies reveal water quality violations.

Common source control BMPs that are typically required on new and re-development sites include:

- Enclosing and or covering the pollutant source
- Design of dumpster enclosures with no connection to storm drains
- Connecting trash compactors to sewer
- Connection of interior (including garage) floor drains to sewer
- Covering of storage and operational areas within the site containing or handling potentially deleterious materials
- Physically segregating the pollutant source to prevent run-on of uncontaminated stormwater (berming, cover, sewer connections).
- Car or equipment washing areas connected to sewer.

A full list of source control BMPs are contained in Stormwater Design Manual Volume IV Source Control BMPs.

1.2.5 Construction Stormwater BMPs

Construction stormwater BMPs (SWMMWW Minimum Requirement #2) are required for all proposed projects that clear, grade, or otherwise disturb the site. Erosion and sediment

controls must be provided to prevent, to the maximum extent practicable, the transport of sediment and other pollutants from the project site to downstream drainage facilities, water resources, and adjacent properties. Referred to as Temporary Erosion and Sediment Control (TESC), this is required even if no permanent stormwater facilities are required or proposed.

The City TESC program differs from the Stormwater Design Manual and the Ecology Construction Stormwater General Permit in the following ways:

- TESC plan review is required even if the applicant is also required to obtain an Ecology Construction Stormwater General Permit.
- Discharge from the project site shall not exceed 100 NTUs (nephelometric turbidity units) at all times up to the 10 year/24 hour storm event (3.5 inches in 24 hours) as measured at the City's rain gage.
- City of Issaquah staff will conduct monitoring to verify compliance.
- Updates to the TESC plan are required if the project construction or other circumstances cause changes to the TESC facilities or strategies to meet the requirements herein.
- The City may issue a Stop Work Order and/or a civil penalty under Code Enforcement..

See IMC Chapter 16.26 for specific clearing and grading and TESC standards.

1.2.6 Retrofit Projects

In retrofit situations where the requirements of this Addendum and IMC 16.26 are not triggered, use of Ecology-approved emerging technology BMPs for water quality treatment are encouraged, but not required. New technologies for water quality treatment that are not yet approved by Ecology may be used with prior approval by the City. The request should include information that the proposed treatment device is effective in reducing pollutants from stormwater. The applicant, however, should recognize that subsequent redevelopment that triggers current or future water quality treatment requirements may require modification or replacement of the installed BMP with an Ecology-approved BMP.

1.3 STORMWATER SITE DESIGN TO CONFORM WITH LAND USE CODES AND ADOPTED PLANS

1.3.1 Competing Needs Assessment

Ecology allows certain exemptions to the On-site stormwater management BMPs (SWMMWW Minimum Requirement #5) if there are competing needs at the development site. Competing

Needs criteria are contained in Chapter 5.3.1 of Volume V of the SWMMWW. The On-site Stormwater Management BMPs can be superseded or restricted where they are in conflict with:

- Requirements of the following federal or state laws, rules, and standards: Historic Preservation Laws and Archaeology Laws, Federal Superfund or Washington State Model Toxics Control Act, Federal Aviation Administration requirements for airports, Americans with Disabilities Act.
- Where an LID requirement has been found to be in conflict with special zoning district design criteria adopted and being implemented pursuant to a community planning process, the existing local codes may supersede or reduce the LID requirement.
- Public health and safety standards.
- Transportation regulations to maintain the option for future expansion or multi-modal use of public rights-of-way.
- A local Critical Area Ordinance that provides protection of tree species.
- A local code or rule adopted as part of a Wellhead Protection Program established under the Federal Safe Drinking Water Act; or adopted to protect a Critical Aquifer Recharge Area established under the State Growth Management Act.

This assessment will be addressed during the land use permit process, prior to drainage review, following adopted City codes and policies.

1.3.2 Other Design Considerations

Stormwater site design must be initiated at the project conceptual design stage so that required stormwater facilities not only function given site topography and discharge points, but also to ensure these facilities integrate with land use codes. This evaluation occurs during the land use review and permitting phase. Stormwater LID is part of overall green infrastructure goals that are promoted by the City of Issaquah.

Ideally the two largely independent requirements of stormwater mitigation (both structural and LID) and land use design will be combined using an integrated approach to achieve green infrastructure goals. As an incentive, when stormwater low impact development principles are employed it can reduce the volume of stormwater that requires conveyance and treatment through conventional means, such as detention ponds. Such benefits can reduce site development costs.

1.4 OVERVIEW OF PERMIT SUBMITTAL REQUIREMENTS

1.4.1 Development Review Process

The Development Services Department (DSD) oversees and manages permit intake, review, tracking, and approval. The Permit Center, located within DSD at City Hall Northwest, provides general information for construction in the City limits. Construction permits assure that structures are built to nationally-recognized standards, as well as designed to ensure that buildings are structurally sound and hazard free. Land use permits assure that structures meet zoning requirements and comply with environmental regulations.

The City of Issaquah accepts most permit types online through www.MyBuildingPermit.com. This system allows you to submit the application, upload required documents, download comments, send revisions and receive approved plans. Please verify the following before applying online:

- Contact the Permit Center before apply for a construction permit online. A pre-submittal meeting may be required so staff can preliminarily scope your project for any additional requirements.
- Verify you have access to all your submittal documents in a clean pdf format. If your plan set is being drawn by multiple sources make sure you are able to combine them into one pdf file (plumbing, mechanical, civil etc).

1.4.2 Submittal Requirements

The Development Services Department specifies what submittal and application materials are required for a complete application, including the type of submittals, the required level of detail, the minimum qualifications of preparers of technical documents, and the number of copies that must be submitted. These submittal requirements can be obtained from the Permit Center, the City's website, or via the City's online permit submittal portal www.MyBuildingPermit.com.

For stormwater review, including temporary erosion and sediment control, Minimum Requirement #1 requires preparation of a stormwater site plan called a Technical Information Report (TIR). The content of this plan is detailed in Chapter 3 of Volume 1 of the Stormwater Design Manual, the content of which is dependent on which minimum requirements are triggered. The TIR must include the following chapters:

- a. Project Overview

- b. Existing Conditions Summary and Site Analysis
- c. Off-site Analysis Report
- d. Permanent Stormwater Control Plan (flow control, LID, and water quality facility and analysis and design)
- e. Construction Stormwater Pollution Prevention Plan (SWPPP)
- f. Special Reports and Studies
- g. Other Permits
- h. Operation and Maintenance Manual
- i. Declaration of Covenant or Easement for Privately Maintained Flow Control and Treatment Facilities
- j. Declaration of Covenant or Easement for Privately Maintained On-site Stormwater Management Facilities
- k. Bond Quantities Worksheet

1.4.3 Small Site vs. Large Site Review

Project documentation in the Technical Information Report fall under two types: small site and large site. A Small Site TIR would apply to a project meeting the requirements of MR#1-5, and a Large Site TIR would apply to a project meeting the requirements of MR#1-9.

See submittal requirements for more information.

1.4.4 City of Issaquah Standard Details, Plan Notes, and Approved Materials

All designs and materials shall follow approved guidance contained in City of Issaquah standard details and the Ecology Stormwater Manual. These standards apply to both publicly and privately owned facilities.

Standard details for stormwater construction are included in Attachment 3. These, along with the Approved Materials List and standard plan notes, are available from the Public Works Engineering Department and from the City's website:

<http://issaquahwa.gov/standards>

The City of Issaquah adopts the most recent WSDOT Standard Specifications for Road, Bridge, and Municipal Construction. Materials, joints and protective treatments shall be accordance with WSDOT/APWA 7-04 and 9-05.

1.4.5 Drainage Tracts, Easements and Covenants

1.4.5.1 Public Facilities

Flow control and water quality facilities and flow control BMP devices to be maintained and operated by the City (e.g., single family residential developments) must be located in a tract or right-of-way dedicated to the City of Issaquah. ***Drainage Easements*** are required for drainage facilities that will be operated and maintained by the City of Issaquah but are located on private property. Access roads serving these facilities must be located in the tract or right-of-way and must be connected to an improved public road right-of-way. Underground flow control or water quality facilities (tanks or vaults) may be allowed in private rights-of-way or roads if the easement includes provisions for facility access and maintenance. Applicants shall record the drainage easement against the property prior to final inspection and approval of drainage facilities, using accepted form that are reviewed and approved by the City.

In addition, required vegetated flow paths for full dispersion and basic dispersion BMPs that are located outside of the tract or right-of-way require a recorded ***declaration of covenant and drainage easement*** that stipulates restrictions on use and includes provisions for access and maintenance. City maintenance of these vegetated flow paths will be limited to their flow control BMP functionality. All other maintenance shall remain the responsibility of the owner(s).

1.4.5.2 Private Facilities

Flow Control and Water Quality Treatment BMPs

To ensure future maintenance and City inspection of flow control and water quality treatment BMPs that will be privately maintained (e.g., commercial and multi-family development projects), a ***Declaration of Covenant for Maintenance and Inspection of Stormwater Facilities and BMPs*** shall be recorded against the property prior to final inspection and approval of drainage facilities. The declaration of covenant is designed to achieve the following:

- a) Provide notice to current and future owners of the presence of the stormwater facility
- b) Include a reference to the City's permit number for the project, under which the City maintains a permanent record drawing of the constructed facility.
- c) Require that all stormwater facilities be operated and maintained at the owner's expense in accordance with the original permitted design and in accordance with maintenance standards as adopted by the City in IMC 13.28.100.

- d) Grant the City the right to enter the property at reasonable times for purposes of inspecting the stormwater facility and to perform any corrective maintenance and repair that has not been performed by the property owner within a reasonable time set by the City, and to charge the property owner for the cost of any maintenance and repair work performed by the City.
- e) Prohibit any modification or removal of the drainage facility without written approval from the City.

All stormwater facilities shall be accessible for inspection and maintenance. The Operations and Maintenance Manual for the facility shall identify maintenance requirements and equipment and access required to achieve proper maintenance.

In addition, wherever a flow control or water quality treatment facility is located on a parcel separate from the development that is generating the stormwater, provisions shall be made to ensure that the owners of the development have a perpetual right to own and maintain the stormwater facilities and associated stormwater conveyance lines in the separate parcel(s). This can be done through a ***Grant of Easement***, which shall be recorded against the property prior to final inspection and approval of drainage facilities

Onsite Stormwater BMPs

To ensure future maintenance and City inspection of Onsite Stormwater BMPs located on private property, a ***Declaration of Covenant for Maintenance and Inspection of Onsite Stormwater BMP*** shall be recorded for each site/lot that contains an Onsite Stormwater BMP prior to final inspection and approval. The declaration of covenant is designed to achieve the following:

- a) Provide notice to current and future owners of the presence of Onsite Stormwater BMPs on the lot and the responsibility of the owner to retain, uphold, and protect the flow control BMP devices, features, pathways, limits, and restrictions.
- b) Include as an exhibit, a recordable version of the following information: The Onsite Stormwater BMP site plan showing all developed surfaces (impervious and pervious) and the location and dimensions of flow control BMP devices, features, flowpaths (if applicable), and limits of native growth retention areas (if applicable).
- c) Require that each Onsite Stormwater BMP be operated and maintained at the owner's expense in accordance with the above exhibit.
- d) Grant the City the right to enter the property at reasonable times for purposes of inspecting the flow control BMPs and to perform any corrective maintenance, repair, restoration, or mitigation work on the Onsite Stormwater BMP that has not been performed by the property owner within a reasonable time set by the City, and to

charge the property owner for the cost of any maintenance, repair, restoration, or mitigation work performed by the City.

- e) Prohibit any modification or removal of Onsite Stormwater BMPs without written approval from the City.

1.4.6 City Acceptance of Public Drainage Facilities

IMC 13.28.080 provides criteria for accepting drainage facilities after the expiration of the 2-year maintenance period in connection with the subdivision of land:

- Requirements of IMC 13.28.070 regarding bonding and insurance during the 2-year maintenance period have been fully complied with;
- The facilities have been inspected and approved by the Department after their second year of operation; and
- All necessary easements or dedications entitling the City to properly maintain the facility have been conveyed to the City.
- Signage indicating “stormwater facility”. Signage shall be required to identify permeable pavement, bioretention, or rain gardens as designed and maintained stormwater facility.

1.4.7 Other Standards Affecting Stormwater Design

Table 1-6 summarizes other requirements that typically affect development site and drainage design. Other code requirements not identified may also apply, and will be identified during the pre-application process and subsequent permit review. The engineer/architect should become familiar with these and other requirements and incorporate them into their drainage design as necessary. Questions regarding these requirements shall be directed to the Department listed in Table 1-6.

TABLE 1-6 OTHER REQUIREMENTS AFFECTING DRAINAGE DESIGN		
Subject	Requirement	Reference
City of Issaquah Development Services Department		
Impervious Surface Limits	Limits on site impervious surface area per Land Use Code	IMC18.07.360 (District Standards Table)
Landscape Code	Soil porosity and amendments in landscaping	IMC 18.12.140(P) and (Q)
Landscape Code	No impervious surfaces within the area defined by the drip line of any trees to be retained.	IMC 18.12.140(N)(4)(c)
Critical Areas and Associated Buffers	Allowable uses, including stormwater facilities, in stream and wetland buffers	IMC 18.10.610 (wetlands) IMC 18.10.775 (streams)
Shorelines	Allowable uses, including stormwater facilities, in Shoreline buffer	IMC 18.10.940 (adopted Shoreline Plan)
Transfer of Development Rights (TDR) Program	Reduction in impervious surface areas along stream corridors (sending sites), in exchange for greater density in growth areas (receiving sites)	IMC 18.10.2050(A)(3)
Transfer of Development Rights (TDR) Program	Additional impervious surface area credit for using LID at receiving sites located in the CARA	IMC 18.10.2040(A)(3)(c)
City of Issaquah Public Works Engineering Department		
Flood Hazard Code	Development within designated areas of special flood hazard, including no net fill and no blockage of floodwaters.	IMC 16.36
Critical Aquifer Recharge Area (CARA code)	Hazardous waste management requirements within wellhead protection areas (CARA Class 1 and 2)	IMC 18.10.796 and IMC 13.29
State Department of Ecology		
Underground Injection Control (UIC)	Stormwater infiltration facilities meeting the definition of a UIC well must be registered with Ecology and meet Ecology treatment criteria.	Department of Ecology
NPDES Construction Stormwater Permit	Construction sites over 1.0 acre must obtain Department of Ecology construction stormwater general permit	Department of Ecology

CHAPTER 2. MINIMUM REQUIREMENTS FOR NEW DEVELOPMENT AND REDEVELOPMENT

2.1 EXEMPTIONS

Unless otherwise indicated in this Section, the practices described in this section are exempt from the Minimum Requirements, even if such practices meet the definition of new development or redevelopment.

2.1.1 Forest Practices

Forest practices regulated under Title 222 WAC, except for Class IV General forest practices that are conversions from timberland to other uses, are exempt from the provisions of the minimum requirements.

2.1.2 Pavement Maintenance

The following pavement maintenance practices are exempt: pothole and square cut patching, overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage, shoulder grading, reshaping/regrading drainage systems, crack sealing, resurfacing with in-kind material without expanding the road prism, pavement preservation activities that do not expand the road prism, and vegetation maintenance.

The following pavement maintenance practices are not categorically exempt. The extent to which this Appendix applies is explained for each circumstance.

- Removing and replacing a paved surface to base course or lower, or repairing the pavement base: If impervious surfaces are not expanded, Minimum Requirements #1 - #5 apply.
- Extending the pavement edge without increasing the size of the road prism, or paving graveled shoulders: These are considered new impervious surfaces and are subject to the minimum requirements that are triggered when the thresholds identified for new or redevelopment projects are met.
- Resurfacing by upgrading from dirt to gravel, asphalt, or concrete; upgrading from gravel to asphalt, or concrete; or upgrading from a bituminous surface treatment ("chip seal") to asphalt or concrete: These are considered new impervious surfaces and are subject to the minimum requirements that are triggered when the thresholds identified for new or redevelopment projects are met.

2.1.3 Underground Utility Projects

Underground utility projects that replace the ground surface with in-kind material or materials with similar runoff characteristics are only subject to Minimum Requirement #2, Construction Stormwater Pollution Prevention.

2.2 DEFINITIONS RELATED TO MINIMUM REQUIREMENTS

(Note: See also definitions contained in IMC 16.26 and the SWMMWW).

Arterial – A road or street primarily for through traffic. The term generally includes roads or streets considered collectors. It does not include local access roads which are generally limited to providing access to abutting property. See also [RCW 35.78.010](#), [RCW 36.86.070](#), and [RCW 47.05.021](#).

Bioretention – Engineered facilities that treat stormwater by passing it through a specified soil profile, and either retain or detain the treated stormwater for flow attenuation. Refer to the *Stormwater Management Manual for Western Washington (SWMMWW)*, Chapter 7 of Volume V for Bioretention BMP types and design specifications.

Certified Erosion and Sediment Control Lead (CESCL) – means an individual who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by the Washington Department of Ecology (Ecology) (see BMP C160 in the *Stormwater Management Manual for Western Washington (SWMMWW)*). A CESCL is knowledgeable in the principles and practices of erosion and sediment control. The CESCL must have the skills to assess site conditions and construction activities that could impact the quality of stormwater and, the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges. Certification is obtained through an Ecology approved erosion and sediment control course. Course listings are provided online at Ecology's website.

Commercial Agriculture – means those activities conducted on lands defined in RCW 84.34.020(2) and activities involved in the production of crops or livestock for commercial trade. An activity ceases to be considered commercial agriculture when the area on which it is conducted is proposed for conversion to a nonagricultural use or has lain idle for more than five years, unless the idle land is registered in a federal or state soils conservation program, or unless the activity is maintenance of irrigation ditches, laterals, canals, or drainage ditches related to an existing and ongoing agricultural activity.

Converted vegetation (areas) – The surfaces on a project site where native vegetation, pasture, scrub/shrub, or unmaintained non-native vegetation (e.g., Himalayan blackberry, scotch broom) are converted to lawn or landscaped areas, or where native vegetation is converted to pasture.

Discharge Point – the location where a discharge leaves the Permittee’s MS4 through the Permittee’s MS4 facilities/BMPs designed to infiltrate.

Effective Impervious surface – Those impervious surfaces that are connected via sheet flow or discrete conveyance to a drainage system. Impervious surfaces are considered ineffective if: 1) the runoff is dispersed through at least one hundred feet of native vegetation in accordance with BMP T5.30 – “Full Dispersion” as described in Chapter 5 of Volume V of the *Stormwater Management Manual for Western Washington (SWMMWW)*; 2) residential roof runoff is infiltrated in accordance with Downspout Full Infiltration Systems in BMP T5.10A in Volume III of the *SWMMWW*; or 3) approved continuous runoff modeling methods indicate that the entire runoff file is infiltrated.

Erodible or leachable materials – Wastes, chemicals, or other substances that measurably alter the physical or chemical characteristics of runoff when exposed to rainfall. Examples include erodible soils that are stockpiled, uncovered process wastes, manure, fertilizers, oily substances, ashes, kiln dust, and garbage dumpster leakage.

Hard Surface – An impervious surface, a permeable pavement, or a vegetated roof.

Highway – A main public road connecting towns and cities

Impervious surface – A non-vegetated surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for purposes of determining whether the thresholds for application of minimum requirements are exceeded. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling.

Land disturbing activity – Any activity that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land disturbing activities

include, but are not limited to clearing, grading, filling, and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered a land disturbing activity. Vegetation maintenance practices, including landscape maintenance and gardening, are not considered land-disturbing activity. Stormwater facility maintenance is not considered land disturbing activity if conducted according to established standards and procedures.

Low Impact Development (LID) – A stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

LID Best Management Practices – Distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration. LID BMPs include, but are not limited to, bioretention, rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, minimal excavation foundations, vegetated roofs, and water re-use.

LID Principles – Land use management strategies that emphasize conservation, use of on-site natural features, and site planning to minimize impervious surfaces, native vegetation loss, and stormwater runoff.

Maintenance – Repair and maintenance includes activities conducted on currently serviceable structures, facilities, and equipment that involves no expansion or use beyond that previously existing and results in no significant adverse hydrologic impact. It includes those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems. Those usual activities may include replacement of dysfunctional facilities, including cases where environmental permits require replacing an existing structure with a different type structure, as long as the functioning characteristics of the original structure are not changed. One example is the replacement of a collapsed, fish blocking, round culvert with a new box culvert under the same span, or width, of roadway. In regard to stormwater facilities, maintenance includes assessment to ensure ongoing proper operation, removal of built up pollutants (i.e. sediments), replacement of failed or failing treatment media, and other actions taken to correct defects as identified in the maintenance standards of Chapter 4, Volume V of the *Stormwater Management Manual for Western Washington (SWMMWW)*. See also Pavement Maintenance exemptions in Section 1 of this Appendix.

Native vegetation – Vegetation comprised of plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and which reasonably could have

been expected to naturally occur on the site. Examples include trees such as Douglas Fir, western hemlock, western red cedar, alder, big-leaf maple, and vine maple; shrubs such as willow, elderberry, salmonberry, and salal; and herbaceous plants such as sword fern, foam flower, and fireweed.

New development – Land disturbing activities, including Class IV -general forest practices that are conversions from timber land to other uses; structural development, including construction or installation of a building or other structure; creation of hard surfaces; and subdivision, short subdivision and binding site plans, as defined and applied in Chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development.

Outfall – a point source as defined by 40 CFR 122.2 at the point where a discharge leaves the permittee's MS4 and enters a surface receiving waterbody or surface receiving waters. Outfall does not include pipes, tunnels, or other conveyances which connect segments of the same stream or other surface waters and are used to convey primarily surface waters (i.e., culverts).

On-site Stormwater Management BMPs (aka Onsite Stormwater BMP): As used in this appendix, a synonym for Low Impact Development BMPs.

Permeable pavement – Pervious concrete, porous asphalt, permeable pavers or other forms of pervious or porous paving material intended to allow passage of water through the pavement section. It often includes an aggregate base that provides structural support and acts as a stormwater reservoir.

Pervious Surface – Any surface material that allows stormwater to infiltrate into the ground. Examples include lawn, landscape, pasture, native vegetation areas, and permeable pavements.

Pollution-generating hard surface (PGHS) – Those hard surfaces considered to be a significant source of pollutants in stormwater runoff. See the listing of surfaces under pollution-generating impervious surface.

Pollution-generating impervious surface (PGIS) – Those impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those which are subject to: vehicular use; industrial activities (as further defined in the glossary of the *Stormwater Management Manual for Western Washington (SWMMWW)*); storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the run-on or blow-in of rainfall; metal roofs unless they are coated with an inert, non-leachable material (e.g., baked-on enamel coating); or roofs that are subject to venting significant amounts of dusts, mists, or fumes from manufacturing, commercial, or other indoor activities.

Pollution-generating pervious surfaces (PGPS) – Any non-impervious surface subject to vehicular use, industrial activities (as further defined in the glossary of the *Stormwater Management Manual for Western Washington (SWMMWW)*); or storage of erodible or leachable materials, wastes, or chemicals, and that receive direct rainfall or run-on or blow-in of rainfall, use of pesticides and fertilizers, or loss of soil. Typical PGPS include permeable pavement subject to vehicular use, lawns, and landscaped areas including: golf courses, parks, cemeteries, and sports fields (natural and artificial turf).

Pre-developed condition – The native vegetation and soils that existed at a site prior to the influence of Euro-American settlement. The pre-developed condition shall be assumed to be a forested land cover unless reasonable, historic information is provided that indicates the site was prairie prior to settlement.

Project site – That portion of a property, properties, or right of way subject to land disturbing activities, new hard surfaces, or replaced hard surfaces.

Rain Garden – A non-engineered shallow landscaped depression, with compost-amended native soils and adapted plants. The depression is designed to pond and temporarily store stormwater runoff from adjacent areas, and to allow stormwater to pass through the amended soil profile.

Receiving waterbody or Receiving waters – naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and marine waters, or groundwater, to which a MS4 discharges.

Redevelopment – On a site that is already substantially developed (i.e., has 35% or more of existing hard surface coverage), the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land disturbing activities.

Replaced hard surface – For structures, the removal and replacement of hard surfaces down to the foundation. For other hard surfaces, the removal down to bare soil or base course and replacement.

Replaced impervious surface – For structures, the removal and replacement of impervious surfaces down to the foundation. For other impervious surfaces, the removal down to bare soil or base course and replacement.

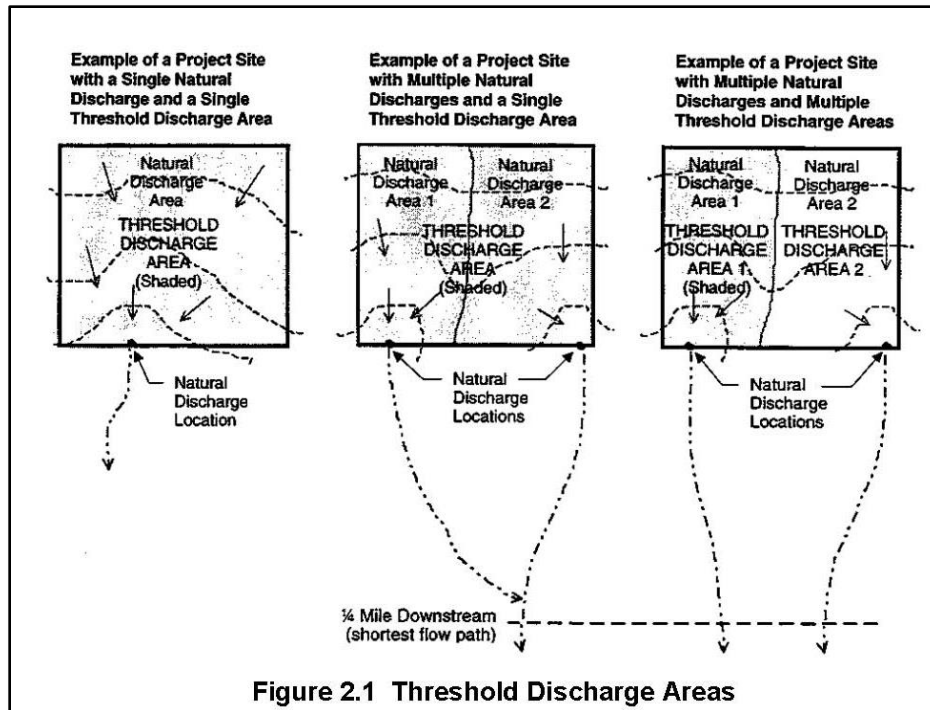
Site – The area defined by the legal boundaries of a parcel or parcels of land that is (are) subject to new development or redevelopment. For road projects, the length of the project site and the right-of-way boundaries define the site.

Source control BMP – A structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. The *Stormwater Management Manual for Western Washington* (SWMMWW) separates source control BMPs into two types. *Structural Source Control BMPs* are physical, structural, or mechanical devices, or facilities that are intended to prevent pollutants from entering stormwater. *Operational BMPs* are non-structural practices that prevent or reduce pollutants from entering stormwater. See Volume IV of the SWMMWW or the King County Stormwater Pollution Control Manual for details.

Stormwater Facility – A constructed component of a stormwater drainage system, designed or constructed to perform a particular function, or multiple functions. Stormwater facilities include, but are not limited to, pipes, swales, ditches, culverts, street gutters, detention ponds, retention ponds, constructed wetlands, infiltration devices, catch basins, oil/water separators, and biofiltration swales.

Stormwater Site Plan (also known as a Technical Information Report) – A comprehensive report containing all of the technical information and analysis necessary for regulatory agencies to evaluate proposed new development or redevelopment project for compliance with stormwater requirements. Contents of the Stormwater Site Plan will vary with the types and size of the project, and individual site characteristics. It includes a Construction Stormwater Pollution Prevention Plan and Permanent Stormwater Control Plan. Elements included in preparing a Stormwater Site Plan is contained in Chapter 3 Volume 1 of the SWMMWW.

Threshold Discharge Area – An on-site area draining to a single natural discharge location or multiple natural discharge locations that combine within one-quarter mile downstream (as determined by the shortest flowpath). The examples in Figure 2.1 below illustrate this definition. The purpose of this definition is to clarify how the thresholds of this appendix are applied to project sites with multiple discharge points.



Vehicular Use – Regular use of an impervious or pervious surface by motor vehicles. The following are subject to regular vehicular use: roads, un-vegetated road shoulders, bike lanes within the traveled lane of a roadway, driveways, parking lots, unrestricted access fire lanes, vehicular equipment storage yards, and airport runways.

The following are not considered subject to regular vehicular use: paved bicycle pathways separated from and not subject to drainage from roads for motor vehicles, restricted access fire lanes, and infrequently used maintenance access roads.

Wetland – Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands.

2.3 APPLICABILITY OF THE MINIMUM REQUIREMENTS

2.3.1 Thresholds

Not all of the Minimum Requirements apply to every development or redevelopment project. The applicability varies depending on the project type and size. This section identifies thresholds that determine the applicability of the Minimum Requirements to projects. Use the flow charts in Figures 2.2, 2.3, and 2.4 to determine which of the Minimum Requirements apply. The Minimum Requirements themselves are presented in Section 3.

Use the thresholds in sections 2.3 and 2.4 at the time of application for a subdivision, plat, short plat, building permit, or other construction permit. The plat or short plat approval shall identify all stormwater BMPs that are required for each lot. For projects involving only land disturbing activities, (e.g., clearing or grading), the thresholds apply at the time of application for the permit allowing or authorizing that activity. Note the exemption in Section 2.1 for forest practices other than Class IV General.

Figure 2.2. Flow Chart for Determining Whether Site is Regulated

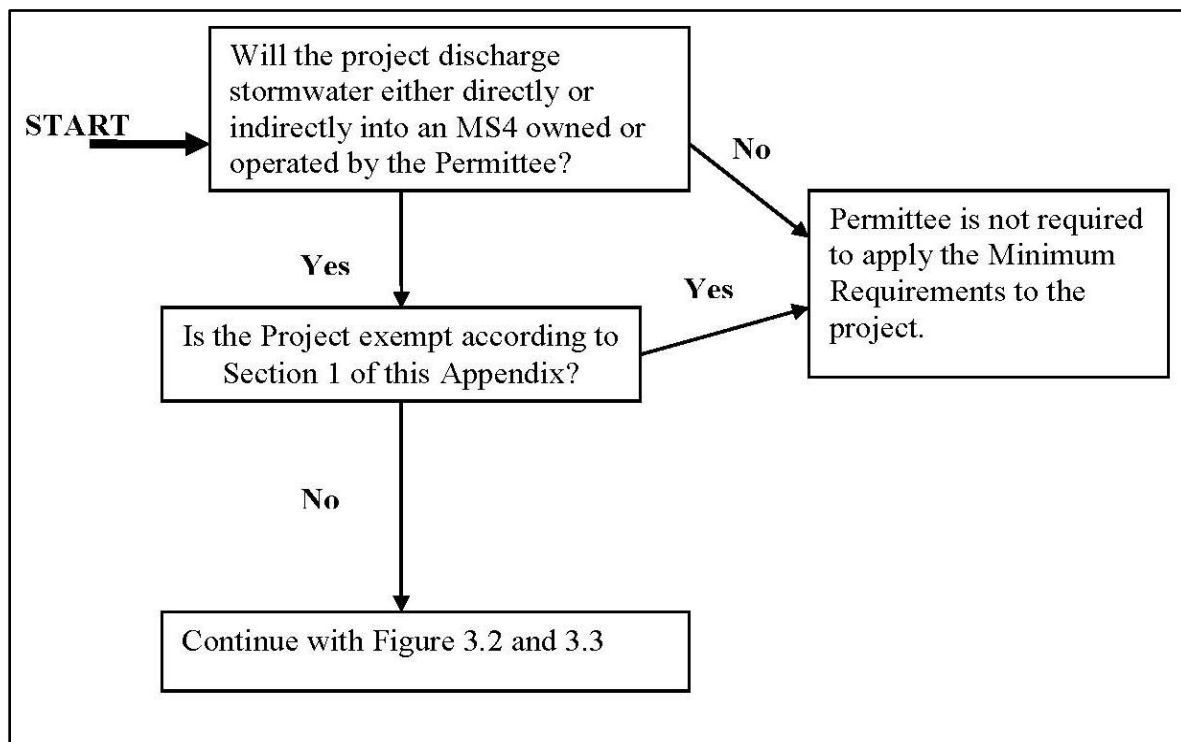


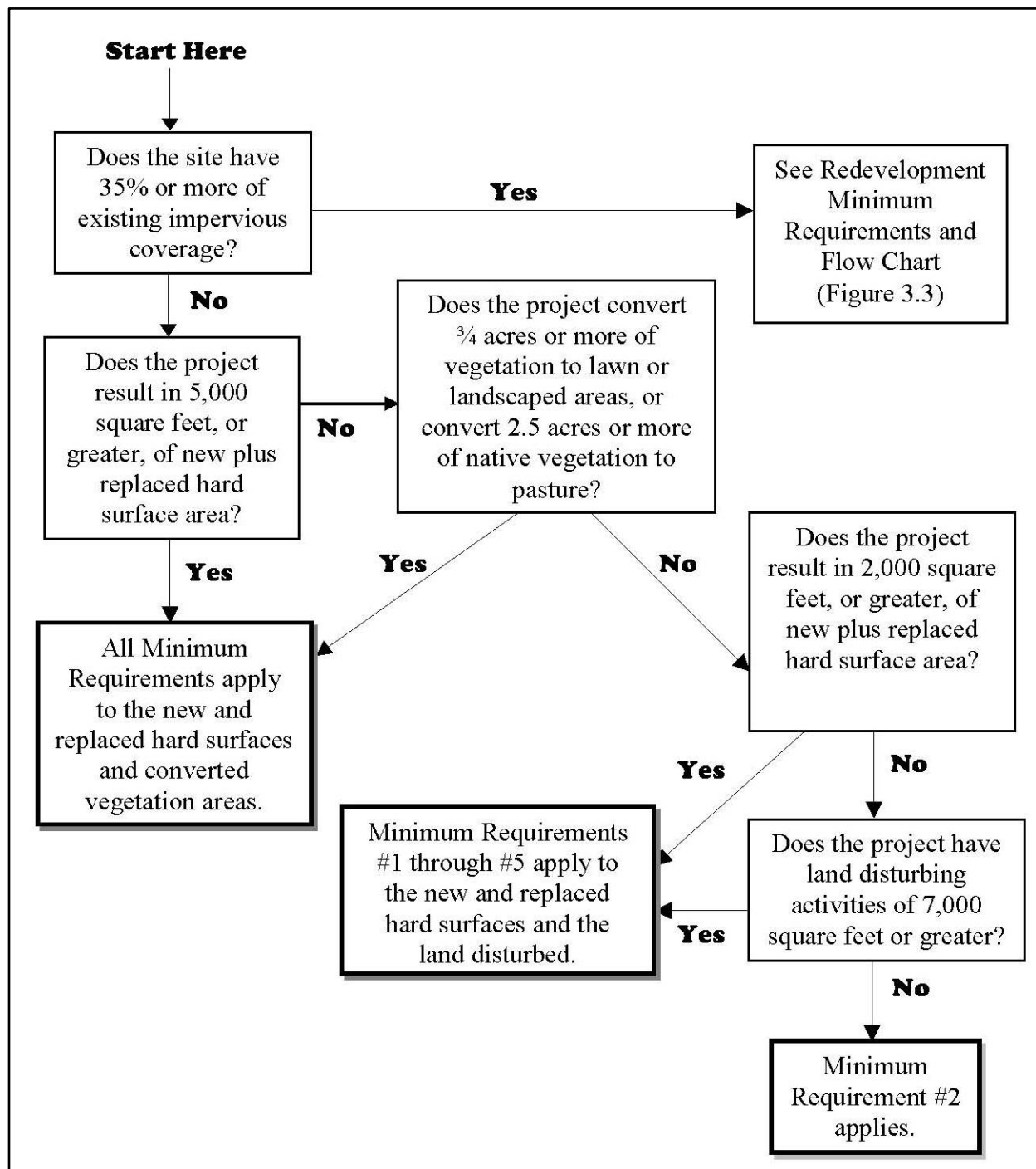
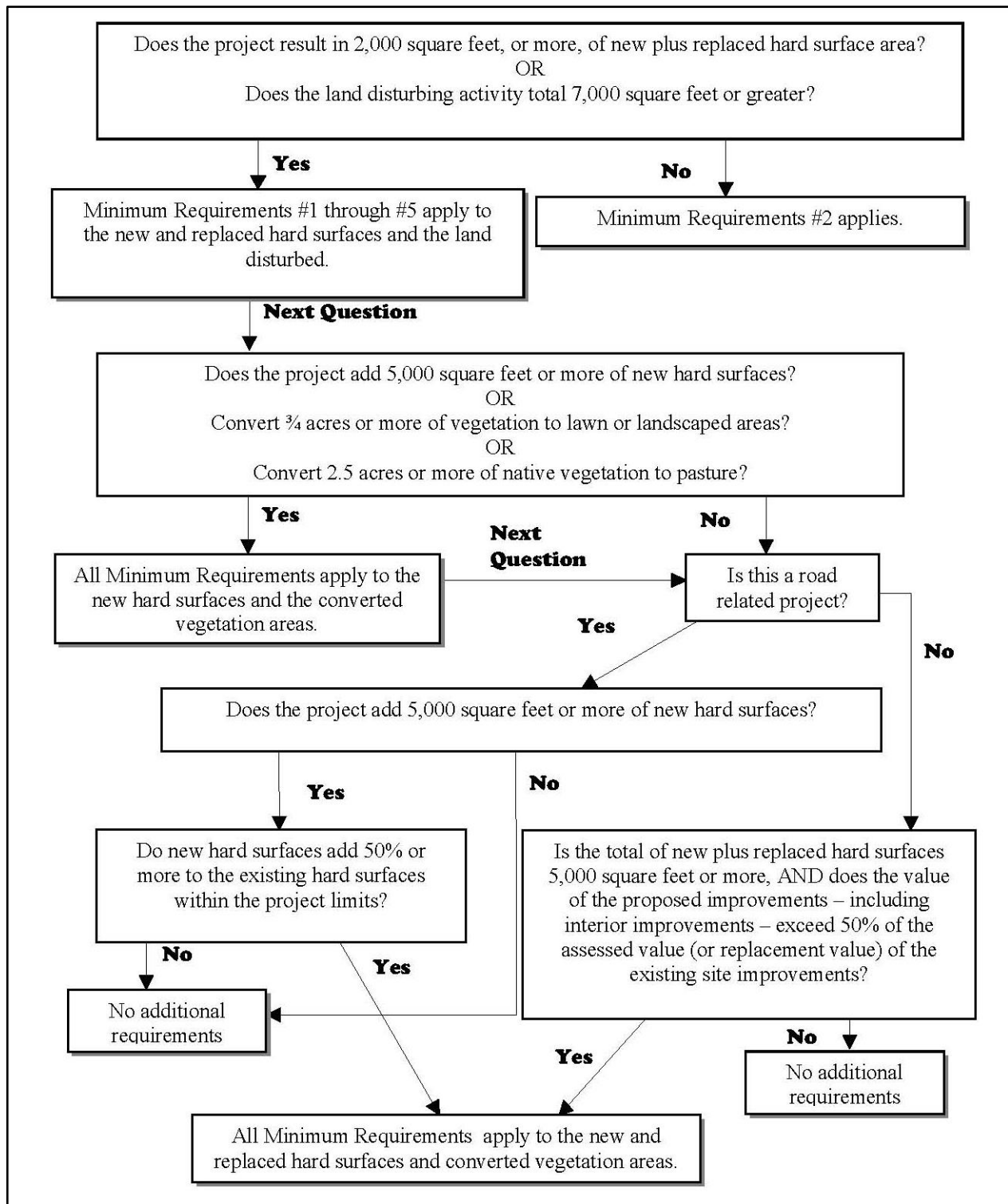
Figure 2.3. Flow Chart for Determining Requirements for New Development

Figure 2.4. Flow Chart for Determining Requirements for Redevelopment

2.3.2 New Development

All new development shall be required to comply with Minimum Requirement #2.

The following new development shall comply with Minimum Requirements #1 through #5 for the new and replaced hard surfaces and the land disturbed:

- Results in 2,000 square feet, or greater, of new plus replaced hard surface area, or
- Has land disturbing activity of 7,000 square feet or greater.

The following new development shall comply with Minimum Requirements #1 through #9 for the new and replaced hard surfaces and the converted vegetation areas:

- Results in 5,000 square feet, or greater, of new plus replaced hard surface area, or
- Converts $\frac{3}{4}$ acres, or more, of vegetation to lawn or landscaped areas, or
- Converts 2.5 acres, or more, of native vegetation to pasture.

2.3.3 Redevelopment

All redevelopment shall be required to comply with Minimum Requirement #2.

The following redevelopment shall comply with Minimum Requirements #1 through #5 for the new and replaced hard surfaces and the land disturbed:

- Results in 2,000 square feet, or more, of new plus replaced hard surface area, or
- Has land disturbing activity of 7,000 square feet or greater.

The following redevelopment shall comply with Minimum Requirements #1 through #9 for the new hard surfaces and converted vegetation areas:

- Adds 5,000 square feet or more of new hard surfaces or,
- Converts $\frac{3}{4}$ acres, or more, of vegetation to lawn or landscaped areas, or
- Converts 2.5 acres, or more, of native vegetation to pasture.

Economic threshold: other types of redevelopment projects shall comply with Minimum Requirements #1 through #9 for the new and replaced hard surfaces and the converted vegetation areas if the total of new plus replaced hard surfaces is 5,000 square feet or more, and the valuation of proposed improvements – including interior improvements – exceeds 50% of the assessed value of the existing site improvements. (See Figure 2.3).

2.3.4 Transportation Projects

For road-related projects, runoff from the replaced and new hard surfaces (including pavement, shoulders, curbs, and sidewalks) and the converted vegetation areas shall meet all the Minimum Requirements if the new hard surfaces total 5,000 square feet or more and total 50%

or more of the existing hard surfaces within the project limits. The project limits shall be defined by the length of the project and the width of the right-of-way (See Figure 2.3).

The Director may grant a variance/exception to the application of the flow control requirements to replaced impervious surfaces if such application imposes a severe economic hardship. See Section 2.6.

2.3.5 Central Issaquah Area Alternative Flow Control Standard

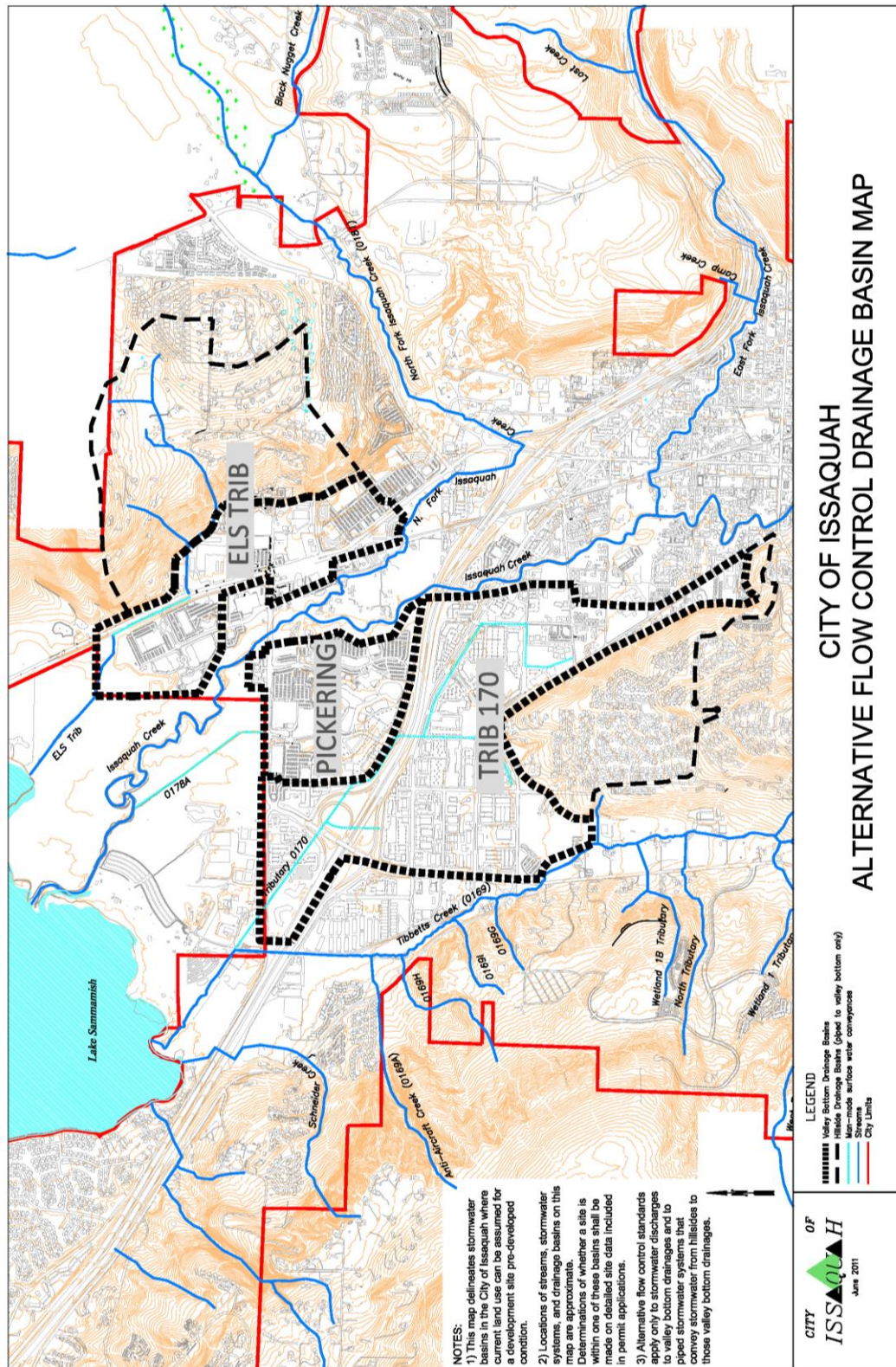
This alternative flow control standard modifies the flow control standard in the valley floor area of downtown Issaquah. In these sub-basins the pre-development condition can be assumed to be existing site conditions instead of forested. Figure 2-5 identifies these subbasins. Projects that incorporate this alternative flow control standard will need to confirm that the project site drains to these sub-basins.

2.3.6 Central Issaquah Area Seasonally Saturated Soil Assumption

The City in 2011 conducted a technical analysis, in coordination with the Department of Ecology, into the pre-development hydrology of this area and specifically where seasonally saturated soil conditions can be documented near the surface (Northwest Hydraulic Consultants 2011). In general, the Ecology's Stormwater Manual specifies that flow control facilities mitigating development and re-development must mimic the runoff characteristics of natural, historical soil conditions (i.e. pre-development hydrology) over a wide range of storm conditions. Ecology staff have further clarified that such pre-development conditions should reflect soils and hydrology that existed prior to first settlement, which occurred in this area in the mid-1800s. That analysis concluded that, historically, soils in valley floor soils do exhibit seasonally saturated conditions as revealed by soil boring logs. For those areas that are seasonally saturated there is sufficient justification of historic high groundwater to use a saturated (i.e., wetland) soil assumption for pre-development analysis.

The seasonally saturated soils assumption is not a blanket adjustment that can be applied to a development project in the absence of site-specific soil data. All project proposals that propose to incorporate a seasonally saturated soil assumption must provide onsite soil log information to confirm this conclusion, following the methods contained in the Northwest Hydraulic Consultants analysis (this memo available through the City's web site or from DSD).

Figure 2-5. Central Issaquah Area Alternative Flow Control Standard Map



2.4 MINIMUM REQUIREMENTS

This Section describes the Minimum Requirements for stormwater management at new development and redevelopment sites. Section 3 of this Appendix should be consulted to determine which of the minimum requirements below apply to any given project. Figures 3.2 and 3.3 should be consulted to determine whether the minimum requirements apply to new surfaces, replaced surfaces, or new and replaced surfaces.

2.4.1 MR#1: Preparation of Stormwater Site Plans

The City requires a Stormwater Site Plan (also termed a Technical Information Report) from all projects meeting the thresholds in Section 2.3 of this Appendix. Stormwater Site Plans shall use site-appropriate development principles, as required and encouraged by local development codes, to retain native vegetation and minimize impervious surfaces to the extent feasible. Stormwater Site Plans shall be prepared in accordance with Chapter 3 of Volume 1 of the *Stormwater Management Manual for Western Washington (SWMMWW)*.

2.4.2 MR#2: Construction Stormwater Pollution Prevention Plan (SWPPP)

Note: To avoid redundant submittals, the City will allow compliance with this Minimum Requirement for an individual site through Ecology's *General NPDES Permit for Stormwater Discharges Associated with Construction Activities*. Documentation of Ecology's stormwater general permit compliance must be supplied with the City permit application.

2.4.2.1 Thresholds

All new development and redevelopment projects are responsible for preventing erosion and discharge of sediment and other pollutants into receiving waters.

Projects which result in 2,000 sq. ft. or more of new plus replaced hard surface area, or which disturb 7,000 sq. ft. or more of land must prepare a SWPPP as part of the Stormwater Site Plan.

Projects below those thresholds are not required to prepare a Construction SWPPP, but must consider all of the Elements listed below for Construction SWPPPs and develop controls for all elements that pertain to the project site.

2.4.2.2 General Requirements

The SWPPP shall include a narrative and drawings. All BMPs shall be clearly referenced in the narrative and marked on the drawings. The SWPPP narrative shall include documentation to explain and justify the pollution prevention decisions made for the project. Each of the thirteen elements listed below must be considered and included in the SWPPP unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the narrative of the SWPPP.

Clearing and grading activities for developments shall be permitted only if conducted pursuant to an approved site development plan (e.g., subdivision approval) that establishes permitted areas of clearing, grading, cutting, and filling. These permitted clearing and grading areas and any other areas required to preserve critical or sensitive areas, buffers, native growth protection easements, or tree retention areas shall be delineated on the site plans and the development site.

The SWPPP shall be implemented beginning with initial land disturbance and until final stabilization. Sediment and Erosion control BMPs shall be consistent with the BMPs contained in chapter 4 of Volume II of the *Stormwater Management Manual for Western Washington* (SWMMWW).

Seasonal Work Limitations - From October 1 through April 30, clearing, grading, and other soil disturbing activities may only be authorized if silt-laden runoff will be prevented from leaving the site through a combination of the following:

1. Site conditions including existing vegetative coverage, slope, soil type and proximity to receiving waters; and
2. Limitations on activities and the extent of disturbed areas; and
3. Proposed erosion and sediment control measures.

Based on the information provided and/or local weather conditions, the City may expand or restrict the seasonal limitation on site disturbance. The following activities are exempt from the seasonal clearing and grading limitations:

1. Routine maintenance and necessary repair of erosion and sediment control BMPs,
2. Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to soil, and
3. Activities where there is one hundred percent infiltration of surface water runoff within the site in approved and installed erosion and sediment control facilities.

2.4.2.3 Construction Stormwater Pollution Prevention Plan (SWPPP) Elements

1. Preserve Vegetation/Mark Clearing Limits:

- a. Before beginning land disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.
- b. Retain the duff layer, native top soil, and natural vegetation in an undisturbed state to the maximum degree practicable.

2. Establish Construction Access:

- a. Limit construction vehicle access and exit to one route, if possible.
- b. Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMPs, to minimize tracking of sediment onto public roads.
- c. Locate wheel wash or tire baths on-site, if the stabilized construction entrance is not effective in preventing tracking sediment onto roads.
- d. If sediment is tracked off site, clean the affected roadways thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or pick up and transport the sediment to a controlled sediment disposal area.
- e. Conduct street washing only after sediment is removed in accordance with 2.d, above.
- f. Control street wash wastewater by pumping back on-site, or otherwise prevent it from discharging into systems tributary to waters of the State.

3. Control Flow Rates:

- a. Protect properties and waterways downstream of development sites from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site.
- b. Where necessary to comply with 3.a, above, construct stormwater retention or detention facilities as one of the first steps in grading. Assure that detention facilities function properly before constructing site improvements (e.g., impervious surfaces).
- c. If permanent infiltration ponds are used for flow control during construction, protect these facilities from siltation during the construction phase.

4. Install Sediment Controls:

1. Design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants.
2. Construct sediment control BMPs (sediment ponds, traps, filters, etc.) as one of the

first steps in grading. These BMPs shall be functional before other land disturbing activities take place.

3. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.
4. Direct stormwater runoff from disturbed areas through a sediment pond or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must meet the flow control performance standard in 3.a, above.
5. Locate BMPs intended to trap sediment on-site in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.
6. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.

5. Stabilize Soils:

- a. Stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base early on areas to be paved, and dust control.
- b. Control stormwater volume and velocity within the site to minimize soil erosion.
- c. Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.
- d. Soils must not remain exposed and unworked for more than the time periods set forth below to prevent erosion:
 - During the dry season (May 1 – September 30): 7 days
 - During the wet season (October 1 – April 30): 2 days
- e. Stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.
- f. Stabilize soil stockpiles from erosion, protect with sediment trapping measures, and where possible, locate away from storm drain inlets, waterways and drainage channels.

- g. Minimize the amount of soil exposed during construction activity.
- h. Minimize the disturbance of steep slopes.
- i. Minimize soil compaction and, unless infeasible, preserve topsoil.

6. Protect Slopes:

- a. Design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).
- b. Divert off-site stormwater (run-on) or ground water away from slopes and disturbed areas with interceptor dikes, pipes and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.
- c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion.
 - Temporary pipe slope drains must handle the peak volumetric flow rate calculated using a 10-minute time step from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model to predict flows, bare soil areas should be modeled as “landscaped area.”
- d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.
- e. Place check dams at regular intervals within constructed channels that are cut down a slope.

7. Protect Drain Inlets:

- a. Protect storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.
- b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).

8. Stabilize Channels and Outlets:

- a. Design, construct, and stabilize all on-site conveyance channels to prevent erosion from the following expected peak flows:

- Channels must handle the peak volumetric flow rate calculated using a 10-minute time step from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis shall use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model to predict flows, bare soil areas should be modeled as “landscaped area.”
- b. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches at the outlets of all conveyance systems.

9. Control Pollutants:

- a. Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants.
- b. Handle and dispose all pollutants, including waste materials and demolition debris that occur on-site in a manner that does not cause contamination of stormwater.
- c. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.
- d. Conduct maintenance, fueling and repair of heavy equipment and vehicles using spill prevention and control measures. Clean contaminated surfaces immediately following any spill incident.
- e. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, such as closed-loop recirculation or upland application, or to the sanitary sewer, with local sewer district approval.
- f. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers’ label requirements for application rates and procedures.
- g. Use BMPs to prevent contamination of stormwater runoff by pH modifying sources. The sources for this contamination include, but are not limited to: bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters.

- h. Adjust the pH of stormwater if necessary to prevent violations of water quality standards.
- i. Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only. Do not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets, or streams. Do not dump excess concrete on-site, except in designated concrete washout areas. Concrete spillage or concrete discharge to surface waters of the State is prohibited.
- j. Obtain written approval from Ecology before using chemical treatment other than CO₂ or dry ice to adjust pH.

10. Control De-Watering:

- a. Discharge foundation, vault, and trench de-watering water, which have similar characteristics to stormwater runoff at the site, into a controlled conveyance system before discharge to a sediment trap or sediment pond.
- b. Discharge clean, non-turbid de-watering water, such as well-point ground water, to systems tributary to, or directly into surface waters of the State, as specified in 8, above, provided the de-watering flow does not cause erosion or flooding of receiving waters. Do not route clean dewatering water through stormwater sediment ponds. Note that “surface waters of the State” may exist on a construction site as well as off site; for example, a creek running through a site.
- c. Handle highly turbid or otherwise contaminated dewatering water separately from stormwater.
- d. Other treatment or disposal options may include:
 - (i) Infiltration
 - (ii) Transport off-site in vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters.
 - (iii) Ecology-approved on-site chemical treatment or other suitable treatment technologies.
 - (iv) Sanitary or combined sewer discharge with local sewer district approval, if there is no other option.
 - (v) Use of a sedimentation bag that discharges to a ditch or swale for small volumes of localized dewatering.

11. Maintain BMPs:

- a. Maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications.
- b. Remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

12. Manage the Project:

- a. Phase development projects to the maximum degree practicable and take into account seasonal work limitations.
- b. Inspection and monitoring – Inspect, maintain, and repair all BMPs as needed to assure continued performance of their intended function.
- c. Maintaining an updated construction SWPPP – Maintain, update, and implement the SWPPP.
- d. Projects that disturb one or more acres must have site inspections conducted by a Certified Erosion and Sediment Control Lead (CESCL). Project sites disturbing less than one acre may have a CESCL or a person without CESCL certification conduct inspections. By the initiation of construction, the SWPPP must identify the CESCL or inspector, who must be present on-site or on-call at all times.

13. Protect Low Impact Development BMPs

- a. Protect all Bioretention and Rain Garden BMPs from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the Bioretention and/or Rain Garden BMPs. Restore the BMPs to their fully functioning condition if they accumulate sediment during construction. Restoring the BMP must include removal of sediment and any sediment-laden Bioretention/rain garden soils, and replacing the removed soils with soils meeting the design specification.
- b. Prevent compacting Bioretention and Rain Garden BMPs by excluding construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.
- c. Control erosion and avoid introducing sediment from surrounding land uses onto permeable pavements. Do not allow muddy construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements or base materials.
- d. Pavements fouled with sediments or no longer passing an initial infiltration test must be cleaned using procedures from the local stormwater manual or the manufacturer's procedures.
- e. Keep all heavy equipment off existing soils under LID BMPs that have been excavated to final grade to retain the infiltration rate of the soils.

2.4.3 MR#3: Source Control of Pollution

All known, available and reasonable source control BMPs must be applied to all projects. Source control BMPs must be selected, designed, and maintained in accordance with Volume IV of the *Stormwater Management Manual for Western Washington*.

2.4.4 MR#4: Preservation of Natural Drainage Systems and Outfalls

Natural drainage patterns shall be maintained, and discharges from the project site shall occur at the natural location, to the maximum extent practicable. The manner by which runoff is discharged from the project site must not cause a significant adverse impact to downstream receiving waters and down gradient properties. All outfalls require energy dissipation.

2.4.5 MR#5: On-Site Stormwater Management

2.4.5.1 *Applicability*

Except as provided below, projects shall employ On-site Stormwater Management BMPs in accordance with the following project thresholds, standards, and lists to infiltrate, disperse, and retain stormwater runoff on-site to the extent feasible without causing flooding or erosion impacts.

Projects qualifying as flow control exempt in accordance with Section 4.7 of this Appendix do not have to achieve the LID performance standard, nor consider bioretention, rain gardens, permeable pavement, and full dispersion if using List #1 or List #2. However, those projects must implement BMP T5.13; BMPs T5.10A, B, or C; and BMP T5.11 or T5.12, if feasible.

2.4.5.2 *Project Thresholds*

1. Projects triggering only Minimum Requirements #1 through #5 shall either:
 - a. Use On-site Stormwater Management BMPs from List #1 for all surfaces within each type of surface in List #1; or
 - b. Demonstrate compliance with the LID Performance Standard. Projects selecting this option cannot use Rain Gardens. They may choose to use Bioretention BMPs as described in the *SWMMWW* (optional).
2. Projects triggering Minimum Requirements #1 through #9 shall either:
 - a. Use On-site Stormwater Management BMPs from List #2; or
 - b. Demonstrate compliance with the LID Performance Standard and BMP T5.13 (optional).

Note: the LID Performance Standard is only required for projects located outside of the Urban Growth Area. No locations in Issaquah fall into that requirement since Issaquah is entirely within the UGA. However, projects can voluntarily adopt that standard and therefore it is identified as optional.

2.4.5.3 *Low Impact Development Performance Standard (optional)*

Stormwater discharges shall match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 8% of the 2-year peak flow to 50% of the 2-year peak flow. Refer to the Standard Flow Control Requirement section in Minimum Requirement #7 for information about the assignment of the pre-developed condition. Project sites that must also meet minimum requirement #7 shall match flow durations between 8% of the 2-year flow through the full 50-year flow.

2.4.5.4 List #1: On-site Stormwater Management BMPs for Projects Triggering Minimum Requirements #1 through #5

For each surface, consider the BMP's in the order listed for that type of surface. Use the first BMP that is considered feasible. No other On-site Stormwater Management BMP is necessary for that surface. Feasibility shall be determined by evaluation against:

1. Design criteria, limitations, and infeasibility criteria identified for each BMP in the *SWMMWW*; and
2. Competing Needs Criteria listed in Chapter 5 of Volume V of the *SWMMWW*.

Lawn and landscaped areas:

1. Post-Construction Soil Quality and Depth in accordance with BMP T5.13 in Chapter 5 of Volume V of the *SWMMWW*

Roofs:

1. Full Dispersion in accordance with BMP T5.30 in Chapter 5 of Volume V of the *SWMMWW*, or Downspout Full Infiltration Systems in accordance with BMP T5.10A in Section 3.1.1 of Volume III of the *SWMMWW*.
2. Rain Gardens in accordance with BMP T5.14A in Chapter 5 of Volume V, or Bioretention in accordance with Chapter 7 of Volume V of the *SWMMWW*. The rain garden or bioretention facility must have a minimum horizontal projected surface area below the overflow which is at least 5% of the area draining to it.
3. Downspout Dispersion Systems in accordance with BMP T5.10B in Section 3.1.2 of Volume III of the *SWMMWW*.
4. Perforated Stub-out Connections in accordance with BMP T5.10C in Section 3.1.3 of Volume III of the *SWMMWW*.

Other Hard Surfaces:

1. Full Dispersion in accordance with BMP T5.30 in Chapter 5 of Volume V of the *SWMMWW*.
2. Permeable pavement² in accordance with BMP T5.15 in Chapter 5 of Volume V of the *SWMMWW*, or Rain Gardens in accordance with BMP T5.14A in Chapter 5 of Volume V,

or Bioretention in accordance with Chapter 7 of Volume V of the *SWMMWW*. The rain garden or bioretention facility must have a minimum horizontal projected surface area below the overflow which is at least 5% of the area draining to it.

3. Sheet Flow Dispersion in accordance with BMP T5.12, or Concentrated Flow Dispersion in accordance with BMP T5.11 in Chapter 5 of Volume V of the *SWMMWW*.

² This is not a requirement to pave these surfaces. Where pavement is proposed, it must be permeable to the extent feasible unless full dispersion is employed.

2.4.5.5 List #2: On-site Stormwater Management BMPs for Projects Triggering Minimum Requirements #1 through #9

For each surface, consider the BMPs in the order listed for that type of surface. Use the first BMP that is considered feasible. No other On-site Stormwater Management BMP is necessary for that surface. Feasibility shall be determined by evaluation against:

1. Design criteria, limitations, and infeasibility criteria identified for each BMP in the *SWMMWW*; and
2. Competing Needs Criteria listed in Chapter 5 of Volume V of the *SWMMWW*.

Lawn and landscaped areas:

1. Post-Construction Soil Quality and Depth in accordance with BMP T5.13 in Chapter 5 of Volume V of the *SWMMWW*

Roofs:

1. Full Dispersion in accordance with BMP T5.30 in Chapter 5 of Volume V of the *SWMMWW*, or Downspout Full Infiltration Systems in accordance with BMP T5.10A in Section 3.1.1 of Volume III of the *SWMMWW*
2. Bioretention (See Chapter 7 of Volume V of the *SWMMWW*) facilities that have a minimum horizontally projected surface area below the overflow which is at least 5% of the of the total surface area draining to it
3. Downspout Dispersion Systems in accordance with BMP T5.10B in Section 3.1.2 of Volume III of the *SWMMWW*
4. Perforated Stub-out Connections in accordance with BMP T5.10C in Section 3.1.3 of Volume III of the *SWMMWW*.

Other Hard Surfaces:

3. Full Dispersion in accordance with BMP T5.30 in Chapter 5 of Volume V of the *SWMMWW*
4. Permeable pavement² in accordance with BMP T5.15 in Chapter 5 of Volume V of the *SWMMWW*

5. Bioretention (See Chapter 7, Volume V of the *SWMMWW*) facilities that have a minimum horizontally projected surface area below the overflow which is at least 5% of the total surface area draining to it.
6. Sheet Flow Dispersion in accordance with BMP T5.12, or Concentrated Flow Dispersion in accordance with BMP T5.11 in Chapter 5 of Volume V of the *SWMMWW*

2.4.6 MR#6: Runoff Treatment

2.4.6.1 Project Thresholds

When assessing a project against the following thresholds, only consider those hard and pervious surfaces that are subject to this minimum requirement as determined in Section 2.3.

The following require construction of stormwater treatment facilities:

- Projects in which the total of pollution-generating hard surface (PGHS) is 5,000 square feet or more in a threshold discharge area of the project, or
- Projects in which the total of pollution-generating pervious surfaces (PGPS) – not including permeable pavements - is three-quarters (3/4) of an acre or more in a threshold discharge area, and from which there will be a surface discharge in a natural or man-made conveyance system from the site.

2.4.6.2 Treatment-Type Thresholds

1. Oil Control

Treatment to achieve Oil Control applies to projects that have “high-use sites.” High-use sites are those that typically generate high concentrations of oil due to high traffic turnover or the frequent transfer of oil. High-use sites include:

- a. An area of a commercial or industrial site subject to an expected average daily traffic (ADT) count equal to or greater than 100 vehicles per 1,000 square feet of gross building area;
- b. An area of a commercial or industrial site subject to petroleum storage and transfer in excess of 1,500 gallons per year, not including routinely delivered heating oil;
- c. An area of a commercial or industrial site subject to parking, storage or maintenance of 25 or more vehicles that are over 10 tons gross weight (trucks, buses, trains, heavy equipment, etc.);
- d. A road intersection with a measured ADT count of 25,000 vehicles or more on the main roadway and 15,000 vehicles or more on any intersecting roadway, excluding projects proposing primarily pedestrian or bicycle use improvements.

2. Phosphorus Treatment

The City of Issaquah adopts the Phosphorus Treatment Standard for all stormwater discharging to surface water. Discharge to groundwater outside of the ¼-mile boundary with Lake Sammamish is exempt.

3. Enhanced Treatment

Except where specified below under “4. Basic Treatment”, Enhanced treatment for reduction in dissolved metals is required for the following project sites that: 1) discharge directly to fresh waters or conveyance systems tributary to fresh waters designated for aquatic life use or that have an existing aquatic life use; or 2) use infiltration strictly for flow control – not treatment – and the discharge is within ¼ mile of a fresh water designated for aquatic life use or that has an existing aquatic life use:

- a. Industrial project sites,
- b. Commercial project sites,
- c. Multi-family project sites, and
- d. High AADT roads as follows:
 - Fully controlled and partially controlled limited access highways with Annual Average Daily Traffic (AADT) counts of 15,000 or more
 - All other roads with an AADT of 7,500 or greater
 - Outside of Urban Growth Management Areas:
 - Roads with an AADT of 15,000 or greater unless discharging to a 4th Strahler order stream or larger;
 - Roads with an AADT of 30,000 or greater if discharging to a 4th Strahler order stream or larger (as determined using 1:24,000 scale maps to delineate stream order).

Any areas of the above-listed project sites that are identified as subject to Basic Treatment requirements (below), are not also subject to Enhanced Treatment requirements. For developments with a mix of land use types, the Enhanced Treatment requirement shall apply when the runoff from the areas subject to the Enhanced Treatment requirement comprise 50% or more of the total runoff within a threshold discharge area.

4. Basic Treatment:

Basic Treatment is required in the following circumstances:

- Project sites that discharge to the ground, UNLESS:
 - 1) The soil suitability criteria for infiltration treatment are met (See Chapter 3, Volume III of the *SWMMWW*), and alternative pretreatment is provided (see Chapter 6, Volume V

of the *SWMMWW*); or

2) The project site uses infiltration strictly for flow control – not treatment - and the discharge is within ¼-mile of a phosphorus sensitive lake (use a Phosphorus Treatment facility), or

3) The project site is industrial, commercial, multi-family residential, or a high AADT road (consistent with the Enhanced Treatment-type thresholds listed above) and is within ¼ mile of a fresh water designated for aquatic life use or that has an existing aquatic life use.(use an Enhanced Treatment facility).

- Residential projects not otherwise needing phosphorus control as designated by USEPA, the Department of Ecology, or by the Permittee;
- Project sites discharging directly (or indirectly through a municipal separate storm sewer system) to Basic Treatment Receiving Waters (Appendix I-C of the *SWMMWW*);
- Project sites that drain to fresh water that is not designated for aquatic life use, and does not have an existing aquatic life use; and project sites that drain to waters not tributary to waters designated for aquatic life use or that have an existing aquatic life use;
- Landscaped areas of industrial, commercial, and multi-family project sites, and parking lots of industrial and commercial project sites that do not involve pollution-generating sources (e.g., industrial activities, customer parking, storage of erodible or leachable material, wastes or chemicals) other than parking of employees' private vehicles. For developments with a mix of land use types, the Basic Treatment requirement shall apply when the runoff from the areas subject to the Basic Treatment requirement comprise 50% or more of the total runoff within a threshold discharge area.

2.4.6.3 Treatment Facility Sizing

Size stormwater treatment facilities for the entire area that drains to them, even if some of those areas are not pollution-generating, or were not included in the project site threshold decisions (Section 3 of this appendix) or the treatment threshold decisions of this minimum requirement.

Water Quality Design Storm Volume

The volume of runoff predicted from a 24-hour storm with a 6-month return frequency (a.k.a., 6-month, 24-hour storm). Wetpool facilities are sized based upon the volume of runoff predicted through use of the Natural Resource Conservation Service curve number equations in Chapter 2 of Volume III of the *SWMMWW*), for the 6-month, 24-hour storm. Alternatively, when using an approved continuous runoff model, the water quality design storm volume shall be equal to the simulated daily volume that represents the upper limit of the range of daily

volumes that accounts for 91% of the entire runoff volume over a multi-decade period of record.

Water Quality Design Flow Rate

1. Preceding Detention Facilities or when Detention Facilities are not required:

The flow rate at or below which 91% of the runoff volume, as estimated by an approved continuous runoff model, will be treated. Design criteria for treatment facilities are assigned to achieve the applicable performance goal (e.g., 80% TSS removal) at the water quality design flow rate. At a minimum, 91% of the total runoff volume, as estimated by an approved continuous runoff model, must pass through the treatment facility(ies) at or below the approved hydraulic loading rate for the facility(ies).

2. Downstream of Detention Facilities:

The water quality design flow rate must be the full 2-year release rate from the detention facility.

Treatment Facility Selection, Design, and Maintenance

Stormwater treatment facilities shall be:

2. Selected in accordance with the process identified in Chapter 4 of Volume I, and Chapter 2 of Volume V of the *SWMMWW*,
- Designed in accordance with the design criteria in Volume V of the *SWMMWW*, and
- Maintained in accordance with the maintenance schedule in Volume V of the *SWMMWW*.

2.4.6.4 Additional Requirements

The discharge of untreated stormwater from pollution-generating hard surfaces to ground water must not be authorized by the Permittee, except for the discharge achieved by infiltration or dispersion of runoff through use of On-site Stormwater Management BMPs in accordance with Chapter 5, Volume V and Chapter 7, Volume V of the *SWMMWW*; or by infiltration through soils meeting the soil suitability criteria in Chapter 3 of Volume III of the *SWMMWW*.

2.4.7 MR#7: Flow Control

2.4.7.1 Applicability

Except as provided below, projects must provide flow control to reduce the impacts of stormwater runoff from hard surfaces and land cover conversions. The requirement below applies to projects that discharge stormwater directly, or indirectly through a conveyance system, into a fresh water body.

Flow control is not required for projects that discharge directly to, or indirectly through an MS4 to a water listed in Appendix I-E of the *SWMMWW* subject to the following restrictions:

- Direct discharge to the exempt receiving water does not result in the diversion of drainage from any perennial stream classified as Types 1, 2, 3, or 4 in the State of Washington Interim Water Typing System, or Types “S”, “F”, or “Np” in the Permanent Water Typing System, or from any category I, II, or III wetland; and
- Flow splitting devices or drainage BMP’s are applied to route natural runoff volumes from the project site to any downstream Type 5 stream or category IV wetland:
 - Design of flow splitting devices or drainage BMP’s will be based on continuous hydrologic modeling analysis. The design will assure that flows delivered to Type 5 stream reaches will approximate, but in no case exceed, durations ranging from 50% of the 2-year to the 50-year peak flow.
 - Flow splitting devices or drainage BMP’s that deliver flow to category IV wetlands will also be designed using continuous hydrologic modeling to preserve pre-project wetland hydrologic conditions unless specifically waived or exempted by regulatory agencies with permitting jurisdiction; and
- The project site must be drained by a conveyance system that is comprised entirely of manmade conveyance elements (e.g., pipes, ditches, outfall protection) and extends to the ordinary high water line of the exempt receiving water; and
- The conveyance system between the project site and the exempt receiving water shall have sufficient hydraulic capacity to convey discharges from future build-out conditions (under current zoning) of the site, and the existing condition from non-project areas from which runoff is or will be collected; and
- Any erodible elements of the manmade conveyance system must be adequately stabilized to prevent erosion under the conditions noted above.

If the discharge is to a stream that leads to a wetland, or to a wetland that has an outflow to a stream, both this minimum requirement (Minimum Requirement #7) and Minimum Requirement #8 apply.

2.4.7.2 Thresholds

When assessing a project against the following thresholds, consider only those impervious, hard, and pervious surfaces that are subject to this minimum requirement as determined in Section 2.3.

The following circumstances require achievement of the standard flow control requirement for western Washington:

- Projects in which the total of effective impervious surfaces is 10,000 square feet or more in a threshold discharge area, or
- Projects that convert $\frac{3}{4}$ acres or more of vegetation to lawn or landscape, or convert 2.5 acres or more of native vegetation to pasture in a threshold discharge area, and from which there is a surface discharge in a natural or man-made conveyance system from the site, or
- Projects that through a combination of hard surfaces and converted vegetation areas cause a 0.10 cubic feet per second (cfs) increase or greater in the 100-year flow frequency from a threshold discharge area as estimated using the Western Washington Hydrology Model or other approved model and one-hour time steps (or a 0.15 cfs increase or greater using 15-minute time steps). Washington Hydrology Model or other approved model and one-hour time steps (or a 0.15 cfs increase or greater using 15-minute time steps). Washington Hydrology Model or other approved model and one-hour time steps (or a 0.15 cfs increase or greater using 15-minute time steps).

The 0.10 cfs (one-hour time steps) or 0.15 cfs (15-minute time steps) increase should be a comparison of the post-project runoff to the existing condition runoff. For the purpose of applying this threshold, the existing condition is either the pre-project land cover, or the land cover that existed at the site as of a date when the local jurisdiction first adopted flow control requirements into code or rules.

2.4.7.3 *Standard Flow Control Requirement*

Stormwater discharges shall match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow. The pre-developed condition to be matched shall be a forested land cover unless:

- Reasonable, historic information is available that indicates the site was prairie prior to settlement (modeled as “pasture” in the Western Washington Hydrology Model); or
- The Central Issaquah Alternative Flow Control Standard applies (see Section 2.2.5); or
- This standard requirement is waived for sites that will reliably infiltrate all the runoff from hard surfaces and converted vegetation areas.

2.4.7.4 Additional Requirement

Flow Control BMPs shall be selected, designed, and maintained in accordance with Volume III of the *SWMMWW* or an approved equivalent.

2.4.8 MR#8: Wetlands Protection

2.4.8.1 Applicability

The requirements below apply only to projects whose stormwater discharges into a wetland, either directly or indirectly through a conveyance system.

2.4.8.2 Thresholds

The thresholds identified in Minimum Requirement #6 – Runoff Treatment, and Minimum Requirement #7 – Flow Control shall also be applied to determine the applicability of this requirement to discharges to wetlands.

2.4.8.3 Standard Requirement

Projects shall comply with Guide Sheets #1 through #3 in Appendix I-D of the *SWMMWW*. The hydrologic analysis shall use the existing land cover condition to determine the existing hydrologic conditions unless directed otherwise by a regulatory agency with jurisdiction.

2.4.8.4 Additional Requirements

Stormwater treatment and flow control facilities shall not be built within a natural vegetated buffer, except for:

- Necessary conveyance systems as approved by the Permittee; or
- As allowed in wetlands approved for hydrologic modification and/or treatment in accordance with Guide Sheet 2 in Appendix I-D of the *SWMMWW*.

2.4.9 MR#9: Operation and Maintenance

An operation and maintenance manual that is consistent with the provisions in Volume V of the *SWMMWW* shall be provided for proposed stormwater facilities and BMPs. The party (or parties) responsible for maintenance and operation shall be identified in the operation and maintenance manual. For private facilities a copy of the operation and maintenance manual shall be retained on-site or within reasonable access to the site, and shall be transferred with

the property to the new owner. A log of maintenance activity that indicates what actions were taken shall be kept and be available for inspection by the local government.

ORDINANCE NO. 2783

AN ORDINANCE OF THE CITY OF ISSAQUAH, WASHINGTON, ADOPTING BY REFERENCE AMENDMENTS TO THE ISSAQUAH MUNICIPAL CODE CHAPTER 1.36 CODE ENFORCEMENT, CHAPTER 13.28 STORMWATER MANAGEMENT POLICY, CHAPTER 16.26 CLEARING AND GRADING, CHAPTER 16.30 EROSION AND SEDIMENT CONTROL, CHAPTER 18.02 DEFINITIONS, CHAPTER 18.07 REQUIRED DEVELOPMENT AND DESIGN STANDARDS, CHAPTER 18.10 ENVIRONMENTAL PROTECTION, AND THE CENTRAL ISSAQUAH DEVELOPMENT AND DESIGN STANDARDS CHAPTER 1.0 PURPOSE AND APPLICABILITY AND CHAPTER 2.0 DEFINITIONS, REGARDING PROVISIONS TO SUPPORT IMPLEMENTATION OF THE STATE ENVIRONMENTAL PROTECTION AGENCY'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PHASE II STORMWATER PERMIT; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, the City of Issaquah administration developed proposed amendments to the Issaquah Municipal Code and Central Issaquah Design Standards in order to support implementation of the State Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Permit; and

WHEREAS, environmental review was not done on the proposed amendments due to an exemption for "procedural actions - solely related to governmental procedures and containing no substantive standards respecting use of modifications of the environment." and required notice to the State of Washington was sent on August 4, 2016; and

WHEREAS, the River and Streams Board held a public work session on July 19, 2016 and reviewed all the proposed amendments and was very supportive of the proposed amendments and recommends approval; and

WHEREAS, pursuant to legal notice published in *The Issaquah Reporter* on July 28, 2016, the Planning Policy Commission held a public hearing to consider the proposed amendments to *IMC Chapter 18.02 Definitions*, *IMC Chapter 18.07 Required Development and Design Standards*, and *IMC Chapter 18.10 Environmental Protection* and the Central Issaquah Development and Design Standards, including *Chapter 1.0 Purpose and Applicability*, *Chapter 2.0 Definitions* on August 11, 2016; and

WHEREAS, all persons desiring to comment on the proposal were given a full and complete opportunity to be heard; and

WHEREAS, after completing the public hearing, the Planning Policy Commission decided to recommend adoption of the proposed amendments with modifications to further clarify said amendments regarding impervious surface definition and strengthened language to implement Stormwater LID as much as feasible in the Central Issaquah area provided LID doesn't prevent achievement of the Central Plan vision; and

WHEREAS, the Planning Policy Commission adopted findings in support of its recommendation on August 11, 2016 and thereafter forwarded its recommendation to the City Council; and

WHEREAS, the City of Issaquah Administration concurs with the Planning Policy Commission's recommendation including the modification to the proposed amendments; and

WHEREAS, the Issaquah City Council's Land and Shore Committee considered the recommendation of the Planning Policy Commission, the River and Streams Board and the City of Issaquah Administration and, after reviewing the recommendation has decided to recommend that the full Council adopt the proposed Code changes as recommended; and

WHEREAS, the Issaquah City Council has considered the recommendations of the Council Land and Shore Committee, the Planning Policy Commission, the River and Streams Board and the City of Issaquah Administration, and has determined to take the actions set forth in this ordinance; NOW THEREFORE,

THE CITY COUNCIL OF THE CITY OF ISSAQUAH, WASHINGTON, DO
ORDAIN AS FOLLOWS:

Section. 1 Code Enforcement. The Issaquah Municipal Code Section 1.36.030 Enforcement is hereby amended as set forth in Exhibit A to this Ordinance, which is attached hereto and incorporated herein by reference as if set forth in full.

Section 2. Stormwater Management Policy. The Issaquah Municipal Code Chapter 13.28 Stormwater Management Policy is hereby amended as set forth in Exhibit A to this Ordinance, which is attached hereto and incorporated herein by reference as if set forth in full.

Section 3. Clearing and Grading. The Issaquah Municipal Code Chapter 16.26 Clearing and Grading is hereby amended as set forth in Exhibit A to this Ordinance, which is attached hereto and incorporated herein by reference as if set forth in full.

Section 4. Erosion and Sediment Control. The Issaquah Municipal Code Chapter 16.30 Erosion and Sediment Control is hereby amended as set forth in Exhibit A to this Ordinance, which is attached hereto and incorporated herein by reference as if set forth in full.

Section 5. Clarify Regulations to Support Implementation of Stormwater Low Impact Development Requirements. The Central Issaquah Development and Design Standards, including *Chapter 1.0 Purpose and Applicability*, *Chapter 2.0 Definitions*, and the Issaquah Municipal Code, including *IMC Chapter 18.02 Definitions*, *IMC Chapter 18.07 Required*

Development and Design Standards, and *IMC Chapter 18.10 Environmental Protection* is hereby amended as set forth on Exhibit A to this Ordinance, which is attached hereto and incorporated herein by reference as if set forth in full.

Section 6. Ordinance to be transmitted to Department. Pursuant to RCW 36.70A.106, this Ordinance shall be transmitted to the Washington Department of Commerce as required by law.

Section 7. Severability. If any section, sentence, clause or phrase of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this ordinance.

Section 8. Effective Date. This ordinance or a summary thereof consisting of the title shall be published in the official newspaper of the City, and shall take effect and be in full force five (5) days after publication.

Passed by the City Council of the City of Issaquah, the 7th day of November, 2016.

Approved by the Mayor of the City of Issaquah the 7th day of November, 2016.




FRED BUTLER, MAYOR

ATTEST/AUTHENTICATED:



CHRISTINE L. EGGERS, CITY CLERK

APPROVED AS TO FORM:



OFFICE OF THE CITY ATTORNEY

PUBLISHED: Nov. 11, 2016
EFFECTIVE DATE: Nov. 16, 2016
ORDINANCE NO.: 2783 / AB 7122

Exhibits:

A: Issaquah Municipal Code and Central Issaquah Development and Design Standards
Amendments – Legislative Format

**ORDINANCE EXHIBITS A1-A5
STORMWATER MANAGEMENT AND LAND USE AMENDMENTS**

Exhibit A1: IMC 1.36.030 Enforcement

Exhibit A2: IMC 13.28 Stormwater Management Policy

Exhibit A3: IMC 16.26 Clearing, Grading and Stormwater Management

Exhibit A4: IMC 16.30 Erosion and Sediment Control

Exhibit A5: IMC 18 Land Use Code and Central Issaquah Development and Design Standards

Exhibit A5.a – Impervious Surface Definition Clarification

Exhibit A5.b – Critical Area Definition changes to support LID

Exhibit A5.c – Allowed Wetland Activities changes to support LID

Exhibit A5.d – Alterations to streams and buffers changes to support LID

Exhibit A5.e – Competing Needs with Special Zoning District

**Please note that in the Exhibits, sections which are being recodified are shown as new text.*

Exhibit A1: IMC 1.36.030 Enforcement

No changes before Title 16 Buildings and Construction.

Title 16 Buildings and Construction

Any violation of Chapter 16.04 IMC \$250.00

16.20.010(A) Requirements – Generally. (Removal of remnants.) \$250.00

16.20.010(B) Requirements – Generally. (Footings, etc., removed.) \$250.00

16.20.010(C) Requirements – Generally. (Basement excavations filled.) \$250.00

16.20.010(D) Requirements – Generally. (Driveways removed, etc.) \$250.00

16.20.010(E) Requirements – Generally. (Restore to natural grade.) \$250.00

16.20.010(F) Requirements – Generally. (Leave perimeter sidewalks and curbs undisturbed.) \$250.00

16.20.010(G) Requirements – Generally. (Retaining walls not removed.) \$250.00

~~16.26.040 Permit required. (Clearing and grading.) \$1,000~~

Chapter 16.26 1. Failure to comply with any provision of Chapter 16.26 IMC – with no previous violations of Chapter 16.26 IMC under current permit. ~~\$1,000~~ \$500

Chapter 16.26 2. Failure to comply with any provision of Chapter 16.26 IMC – with 1 or more previous violations of Chapter 16.26 IMC under current permit. ~~\$5,000~~ \$1,000

Chapter 16.26 Violation of stop work order. (Clearing and grading.) \$500.00

16.26.040 Permit required. \$1,000

16.26.050(C)(4)(b) Exceedance of 100 NTU Turbidity Limits (cumulative with other penalties for violating Chapter 16.26 penalties)

• >100 < 250 NTU's \$200.00

• > 250 NTU's

○ 1st offense \$1,000.00

○ 2nd offense \$5,000.00 (mandatory

Stop Work Order for 1 week)

○ 3rd offense \$10,000.00 (mandatory

Stop Work Order for 1 month and only allowed

to work during dry season, May 1 through
September 30)

<u>16.30.020</u>	Permit required. (Erosion and sedimentation control.)	\$500.00
<u>Chapter 16.30</u>	1. Failure to comply with any provision of Chapter 16.30 IMC, with no previous violation of Chapter 16.30 IMC under current permit.	\$100.00
<u>Chapter 16.30</u>	2A. Failure to comply with any provision of Chapter 16.30 IMC, with 1 or more previous violations of Chapter 16.30 IMC under current permit, and occurring during the dry season (May 1st to September 30th of the same year).	\$500.00
<u>Chapter 16.30</u>	2B. Failure to comply with any provision of Chapter 16.30 IMC, with 1 or more previous violations of Chapter 16.30 IMC under current permit, and occurring during the wet season (October 1st to April 30th of the following year).	\$1,000
<u>16.30.110(A)</u>	3A. Violation of turbidity limits above 100 NTU, occurring during the dry season (May 1st to September 30th of the same year).	\$100.00
<u>16.30.110(A)</u>	3B. Violation of turbidity limits above 100 NTU, occurring during the wet season (October 1st to April 30th of the following year).	\$200.00
<u>16.30.110(A)</u>	4A. Violation of turbidity limits above 250 NTU, occurring during the dry season (May 1st to September 30th of the same year).	\$500.00
<u>16.30.110(A)</u>	4B. Violation of turbidity limits above 250 NTU, occurring during the wet season (October 1st to April 30th of the following year).	\$1,000
<u>16.30.110(A)</u>	5A. Violation of turbidity limits, with 2 or more previous violations of 250 NTU or higher, occurring during the dry season (May 1st to September 30th of the same year).	\$5,000
<u>16.30.110(A)</u>	5B. Violation of turbidity limits — with 2 or more previous violations of 250 NTU or higher, occurring during the wet season (October 1st to April 30th of the following year).	\$10,000
<u>16.30.110(B)</u>	Violation of stop work order. (Erosion and sediment control.)	\$500.00

No changes past “16.30.110(B)”.

Chapter 13.28 STORMWATER MANAGEMENT POLICY

Sections:

- 13.28.010 Purpose.
- 13.28.020 Definitions.
- 13.28.025 Authorized and prohibited discharges.
- 13.28.030 Development Drainage review ~~— When required.~~
- 13.28.040 Recodified Drainage review ~~— Requirements, review and approval.~~
- 13.28.050 Recodified Drainage review ~~— Adjustments.~~
- 13.28.055 Recodified Drainage review ~~— Adjustments for low impact development proposals.~~
- 13.28.060 Recodified Construction ~~— Timing.~~
- 13.28.070 Recodified Construction ~~— Required bonds and liability insurance.~~
- 13.28.080 Maintenance – Drainage-Stormwater facilities accepted by the City for maintenance.
- 13.28.090 Maintenance – Drainage-Stormwater facilities not accepted by the City for maintenance.
- 13.28.100 Maintenance – Minimum standards.
- 13.28.115 Source Content Best management pRACTICES for pollution source control.
- 13.28.120 Hazards.
- 13.28.130 Administration.
- 13.28.135 Enforcement.
- 13.28.140 Appeals.
- 13.28.150 Severability.

13.28.010 Purpose.

The Council finds this chapter is necessary in order to promote the public health, safety and welfare by providing for the comprehensive management of surface and stormwater, erosion control, and flooding. The Council also finds that this chapter is necessary in order to minimize water quality degradation; prevent flood damage, siltation and habitat destruction in the City's creeks, streams and other water bodies; ~~to protect property owners adjacent to developing land from increased runoff rates which could cause stream erosion and damage to public and private property; to promote sound development and redevelopment policies which respect and preserve the City's watercourses and aquatic habitat; to promote low impact development strategies that reduce impervious surface and stormwater runoff; to ensure the safety of City roads and rights-~~

~~of-way;~~ comply with the Department of Ecology Western Washington Phase II Municipal Stormwater Permit; prevent water quality degradation and groundwater recharge through investigation, evaluation and the implementation of comprehensive and thorough permit review, construction inspection, enforcement of water quality standards and best management practices, and stormwater maintenance programs in order to promote the effectiveness of the requirements contained in this chapter.

13.28.020 Definitions.

The following definitions shall apply in the interpretation and enforcement of this chapter. Additional definitions related to the implementation of this chapter can be found in IMC 16.26, Clearing, Grading, and Stormwater Management, ~~the Surface Water Design Manual and Western Washington Phase II Municipal Permit:~~

~~A. "Adjustment" means a City-approved variation in the application of the requirements of IMC 13.28.040 and the Surface Water Design Manual to a particular project in accordance with IMC 13.28.050. "Adjustment" replaces "variance," which was used in prior editions of the Surface Water Design Manual.~~

~~B. "Applicant" means a property owner or a public agency or public or private utility which owns a right-of-way or other easement or has been adjudicated the right to such an easement pursuant to RCW 8.12.090, or any person or entity designated or named in writing by the property or easement owner to be the applicant, in an application for a development proposal, permit or approval.~~

~~C. "Basin plan" means the 1996 Issaquah Creek Basin and Nonpoint Action Plan.~~

~~D.~~ A. "Best management practices" or "BMPs" means schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and structural or managerial practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

B. "Bioretention" means an engineered facility that stores and treats stormwater by passing it through a specified soil profile, and either retain or detain the treated stormwater for flow attenuation. Refer to the Stormwater Management Manual for bioretention BMP types and design specifications.

~~E.~~ C. "Construct or modify" means to install a new drainage pipe or ditch or make improvements to an existing drainage pipe or ditch (other than routine maintenance, repair or emergency modifications, excluding driveway culverts installed as part of single-family residential building permits) that either serves to concentrate

previously unconcentrated surface and stormwater runoff, or serves to increase, decrease and/or redirect the conveyance of surface and stormwater runoff.

~~F.~~ D. "Conveyance system" means the drainage facilities and features, both natural and constructed, which collect, contain and provide for the flow of surface and stormwater from the highest points on the land down to receiving water. The natural elements of the conveyance system include swales and small drainage courses, streams, rivers, lakes and wetlands. The constructed elements of the conveyance system include gutters, ditches, pipes, channels and most flow control and water quality treatment facilities.

~~G.~~ E. "Department" means the City of Issaquah Public Works Engineering Department or its successor organization.

~~H.~~ "Development" means any activity that requires a permit or approval, including, but not limited to, clearing and grading permit, short plat approval, subdivision approval, building permit, and planned unit development approval.

~~I.~~ F. "Director" means the Director of Public Works Engineering Department, or any duly authorized representative of such Director.

~~J.~~ G. "Drainage" means the collection, conveyance, containment and/or discharge of surface water or and stormwater runoff.

~~K.~~ H. "Drainage facility" means a constructed or engineered feature that collects, conveys, stores or treats surface and stormwater runoff. Drainage facilities shall include, but not be limited to, constructed or engineered streams, pipelines, channels, ditches, gutters, stormwater flow control or water quality treatment BMP/facilities, infiltration facilities, erosion and sediment control facilities and other structures and appurtenances that provide for drainage.

~~L.~~ "Drainage review" means an evaluation by City of Issaquah permit review staff of a proposed project's compliance with the drainage requirements in the Surface Water Design Manual, references in the Surface Water Design Manual such as basin plans and critical drainage areas, other requirements stated in this chapter, other applicable requirements of the Issaquah Municipal Code including the critical areas regulations (Chapter 18.10 IMC), and conditions of development or environmental permits issued for the project.

~~M. "Erosion and sediment control" means any temporary or permanent measures taken to reduce erosion, control siltation and sedimentation and ensure that sediment-laden water does not leave the site or enter into wetlands or aquatic areas.~~

~~N. "Flow control facility" means a drainage facility designed to mitigate the impacts of increased surface water and or stormwater runoff generated by site development pursuant to the drainage requirements in this chapter. Flow control facilities are designed either to retain water for a considerable length of time and then release it by evaporation, plant transpiration and/or infiltration into the ground or to detain runoff for a short period of time and then release it to the conveyance system.~~

~~O. "I. Hazardous materials" means any material, either singularly or in combination, that is a physical or health hazard, whether the materials are in usable or waste condition; and any material that may degrade surface water or groundwater quality when improperly stored, handled, treated, used, produced, recycled, disposed of, or otherwise mismanaged. Hazardous materials shall also include: all materials defined as or designated by rule as a dangerous waste or extremely hazardous waste under Chapter 70.105 RCW and Chapter 173-303 WAC; hazardous materials shall also include petroleum or petroleum products that are in liquid phase at ambient temperatures, including any waste oils or sludges.~~

~~P. "High-use site" means a commercial, industrial or road intersection site that has characteristics that generate the potential for chronic oil accumulation. High-use sites include:~~

~~1. Commercial or industrial sites subject to:~~

~~a. An expected daily traffic count greater than 100 vehicles per 1,000 square feet of gross building area;~~

~~b. Petroleum storage or transfer in excess of 1,000 gallons per year, not including routine fuel oil storage or transfer; or~~

~~c. Use, storage or maintenance of a fleet of 25 or more diesel vehicles each weighing over 10 tons; or~~

~~2. Road intersections with average daily traffic counts of 25,000 vehicles or more on the main roadway and 15,000 or more vehicles on any intersecting roadway (excluding pedestrian or bicycle use improvement projects).~~

~~Q.-J.~~ “Illicit connection” means a pipe or other stormwater drainage facility that conveys anything not composed entirely of surface and stormwater directly to a stormwater drainage facility or water body, except connections containing allowable discharges as defined in IMC 13.28.025.

~~R.-K.~~ “Illicit discharge” means any direct or indirect nonstormwater discharge to the City's storm system, except as expressly allowed by this chapter.

~~S.~~ “Impervious surface” means a hard surface area non-vegetated surface which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development or that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roofs, walkways, patios, driveways, parking lots, storage areas, areas which are paved, graveled or made of packed or oiled earthen materials or other surfaces which similarly impede the natural infiltration of surface and stormwater. Open, uncovered flow control or water quality retention/detention treatment facilities shall not be considered as impervious surfaces for purposes of determining whether the thresholds for the application of minimum requirements are exceeded. Open, uncovered flow control or water quality retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling.

~~T.~~ “Improvement” means streets (with or without curbs or gutters), sidewalks, crosswalks, parking lots, water mains, sanitary and storm sewers, drainage facilities, street trees and other appropriate items.

~~U.~~ “Low impact development” means a stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions.

~~V.~~ “Master drainage plan” means a comprehensive drainage control plan intended to prevent significant adverse impacts to the natural and constructed drainage system, both on-site and off-site.

~~W.-L.~~ “Municipal separate storm sewer system (MS4)” means a conveyance or system of conveyances (such as roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned or operated by the City of Issaquah;
2. Designed or used for collecting or conveying stormwater;

3. Which is not part of a publicly owned treatment works (POTW). "POTW" means any device or system used in treatment of municipal sewage or industrial wastes of a liquid nature which is publicly owned.

~~X-M.~~ "National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit" means a permit issued by the Environmental Protection Agency (EPA) (or by the Washington Department of Ecology under authority delegated pursuant to 33 USC Section 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

~~Y-N.~~ "Nonstormwater discharge" means any discharge to the storm drain system that is not composed entirely of stormwater.

~~Z-O.~~ "Person" means any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner of a premises, or as the owner's agent.

AA. ~~P.~~ "Pollutant" means anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; nonhazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

~~BB. "Pollution-generating impervious surface" means an impervious surface considered to be a significant source of pollutants in surface and stormwater runoff. Such surfaces include those subject to vehicular use, industrial activities, or storage of erodible or leachable materials; wastes or chemicals and which receive direct rainfall or the run-on or blow-in of rainfall. Thus, a covered parking area would be included if runoff from uphill could regularly run through it or if rainfall could regularly blow in and wet the pavement surface. Metal roofs are also considered pollution-generating impervious surface unless they are treated to prevent leaching.~~

~~CC. "Pollution-generating pervious surface" means a nonimpervious surface considered to be a significant source of pollutants in surface and stormwater runoff, including surfaces subject to use of pesticides and fertilizers, to the use or storage of erodible or leachable materials, wastes or chemicals or to the loss of soil. Such surfaces include, but are not limited to, permeable pavement subject to vehicular use, the lawn and~~

~~landscaped areas including of residential or commercial sites, golf courses, parks and sports fields (natural and artificial).~~

DD. "Project" means any proposed action to alter or develop a site, which may also require drainage review.

EE. "Project site" means the portion of a property, properties or right-of-way subject to proposed land disturbing activities, new impervious hard surfaces or, replaced impervious hard surfaces, alterations or improvements including those required by this chapter.

FF. "Redevelopment project" means, on a site that is already substantially developed (defined as having 35 percent or more of existing impervious hard surface coverage), the creation or addition of impervious hard surfaces; the expansion of a building footprint or a ddition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of impervious hard surface that is not part of a routine maintenance activity; and land disturbing activities.

GG. "Replaced impervious hard surface" means, for structures, the removal and replacement of any horizontal exterior impervious surfaces or down to the foundation, that generates rainfall runoff. For other impervious hard surfaces, the removal down to bare soil or base course and replacement.

~~HH.~~ Q. "Runoff" means water originating from rainfall and other precipitation that is found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes and wetlands as well as shallow groundwater as well as on ground surfaces. For the purposes of this definition, "groundwater" means all waters that exist beneath the land surface or beneath the bed of any stream, lake or reservoir, or other body of surface water, whatever may be the geological formation or structure in which such water stands or flows, percolates, or otherwise moves.

~~II. "SPP Manual," or "Stormwater Pollution Prevention Manual," means best management practices contained in the 2009 King County Stormwater Pollution Prevention Manual and Volume IV of the 2005 2014 Department of Ecology Stormwater Management Manual for Western Washington. If a pollution-generating activity is not covered by these manuals and is contributing to a prohibited discharge, the City may require best management practices from other relevant pollution prevention guidance documents.~~

~~JJ.~~ R. "Site" means the legal boundaries of the parcel or parcels of land that is (are) subject to new development or redevelopment. For road projects, the length of the project site and the right-of-way boundaries define the site.

S. "Source control BMP" means a structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. The Ecology Stormwater Management Manual for Western Washington separates source control BMPs into two types. Structural Source Control BMPs are physical, structural, or mechanical devices, or facilities that are intended to prevent pollutants from entering stormwater. Operational BMPs are non-structural practices that prevent or reduce pollutants from entering stormwater.

~~KK. "Stormwater pollution prevention plan" means a document which describes the best management practices and activities to be implemented by a person to identify sources of pollution or contamination at a premises and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or receiving waters to the maximum extent practicable.~~

~~LL. "Stream channel" means the area of a natural or manmade drainage course between the tops of banks, where deposited contaminants would erode into the stream or become in contact with floodwaters during floods.~~

~~MM.T. "Surface water and stormwater" means water originating from rainfall and other precipitation that is found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes and wetlands as well as shallow groundwater.~~

~~NN. "Surface Water Design Manual" means the 2009 King County Surface Water Design Manual (and supporting documents as appropriate), prepared by King County Department of Natural Resources and Parks or its successor organization, as supplemented and modified by the City of Issaquah 2011 Addendum to the 2009 King County Surface Water Design Manual that specifies local requirements and procedures, describing surface and stormwater design and analysis requirements, procedures and guidance.¹~~

U. "Stormwater Design Manual" means the Department of Ecology 2014 Stormwater Management Manual for Western Washington, prepared by the Department of Ecology, as supplemented and modified by the City of Issaquah 2016 Addendum to the Department of Ecology 2014 Stormwater Management Manual for Western Washington that specifies local requirements and procedures, describing surface and stormwater design and analysis requirements, procedures and guidance, as adopted by IMC 16.26."

~~OO. "Water quality treatment facility" means a drainage facility designed to reduce pollutants once they are already contained in surface and stormwater runoff. Water quality treatment facilities are the structural component of best management practices (BMPs). When used singly or in combination, water quality facilities reduce the potential for contamination of surface and/or groundwaters.~~

V. "Stormwater facility" means a constructed component of a stormwater drainage system, designed or constructed to perform a particular function, or multiple functions. Stormwater facilities include, but are not limited to, pipes, swales ditches, culverts, street gutters, detention ponds, retention ponds, constructed wetlands, infiltration devices, catch basins, oil water separators, and biofiltration swales. When used singularly or in combination, stormwater facilities reduce the potential for contamination of surface and/or groundwaters.

W. "Stormwater treatment and flow control BMPs/Facilities" means detention facilities, treatment BMPs/facilities, bioretention, vegetated roofs, and permeable pavements that help meet Appendix 1 Minimum Requirements #6 (treatment), #7 (flow control), or both.

13.28.025 Authorized and prohibited discharges.

A. Prohibited Discharges – Prohibition of Illegal Discharges. No person shall throw, drain, or otherwise discharge, cause or allow others under its control to throw, drain or otherwise discharge into the municipal storm drainage facility and/or surface and groundwaters any materials other than stormwater.

Examples of prohibited contaminants include but are not limited to the following:

1. Trash or debris.
2. Construction materials.
3. Petroleum products including but not limited to oil, gasoline, grease, fuel oil and heating oil.
4. Antifreeze and other automotive products.
5. Metals in either particulate or dissolved form.
6. Flammable or explosive materials.
7. Radioactive material.
8. Batteries.
9. Acids, alkalis, or bases.
10. Paints, stains, resins, lacquers, or varnishes.
11. Degreasers and/or solvents.
12. Drain cleaners.

13. Pesticides, herbicides, or fertilizers.
14. Steam cleaning wastes.
15. Soaps, detergents, or ammonia.
16. Swimming pool or spa cleaning wastewater, or filter backwash.
17. Chlorine, bromine, or other disinfectants.
18. Heated water.
19. Domestic animal wastes.
20. Sewage.
21. Recreational vehicle waste.
22. Animal carcasses.
23. Food wastes.
24. Bark and other fibrous materials.
25. Lawn clippings, leaves, or branches.
26. Silt, sediment, concrete, cement or gravel.
27. Dyes.
28. Chemicals not normally found in uncontaminated water.
29. Any other process-associated discharge except as otherwise allowed in this section.
30. Any hazardous material or waste not listed above.

B. Allowable Discharges. The following types of discharges shall not be considered illegal discharges for the purposes of this chapter unless the Director determines that the type of discharge, whether singly or in combination with others, is causing or is likely to cause pollution of surface water or groundwater:

1. Diverted stream flows.
2. Rising groundwaters.
3. Uncontaminated groundwater infiltration – as defined in 40 CFR 35.2005(20).
4. Uncontaminated pumped groundwater.
5. Foundation drains.
6. Air conditioning condensation.
7. Irrigation water from agricultural sources that is commingled with urban stormwater.
8. Springs.
9. Water from crawl space pumps.
10. Footing drains.
11. Flows from riparian habitats and wetlands.
12. Discharges from emergency ~~fire fighting~~firefighting activities.
13. Dye testing is allowable but requires verbal notification to the Director at least 1 day prior to the date of test.
14. Non-stormwater discharges authorized by another National Pollution Discharge Elimination System or State Waste Discharge permit.

C. Conditional Discharges. The following types of discharges are prohibited unless the stated conditions are met, or unless the Director determines that the type of discharge, whether singly or in combination with others, is causing or is likely to cause pollution of surface water or groundwater:

1. Potable water, including water from water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted, if necessary and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4;

2. Discharges from lawn watering and other irrigation runoff. These shall be minimized through, at a minimum, public education activities and water conservation efforts;

3. Dechlorinated swimming pool, spa, and hot tub-discharges. These discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4. Discharges shall be thermally controlled to prevent an increase in temperature of the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4;

4. Street and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents. These discharges shall be reduced through, at a minimum, public education activities and/or water conservation efforts. To avoid washing pollutants into the MS4, the amount of street wash and dust control water used must be minimized. At active construction sites, street sweeping must be performed prior to washing the street;

~~5. Nonstormwater discharges covered by any NPDES permit; provided, that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations; and provided, that written approval has been granted for any discharge to the storm drain system;~~

~~6-5.~~ Other nonstormwater discharges. The discharges shall be in compliance with the requirements of a stormwater pollution prevention plan (SWPPP) reviewed by the City which addresses control of such discharges.

D. Prohibition of Illicit Connections.

1. The construction, use, maintenance, or continued existence of illicit connections to the storm drain system is prohibited.

2. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

3. A person is considered to be in violation of this chapter if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

13.28.030 Development Drainage review — When required.

The design and construction of all clearing, grading, and stormwater management systems and facilities shall comply with the requirements and design standards contained in IMC 16.26, Clearing, Grading, and Stormwater Management.

~~A. Stormwater Management Manual Adopted. Except as noted below, the City hereby adopts the Surface Water Design Manual, containing stormwater management design standards, methods, and procedures.~~

~~1. Chapters 1 and 2 are not adopted. Chapters 1 and 2 as amended by the City of Issaquah to specify local requirements and procedures are adopted.~~

~~2. References 1 to 10 in the Reference Section are not adopted.~~

~~B. Stormwater Pollution Prevention Manual Adopted. The City hereby adopts the 2009 King County Stormwater Pollution Prevention Manual, as subsequently amended.~~

~~C. When Required. Drainage review is required when any proposed project meets or exceeds the threshold conditions defined in the Surface Water Design Manual (such as new impervious area, drainage facility modifications, redevelopments, clearing or grading) and is subject to a City development permit or approval.~~

13.28.040 Drainage review – Requirements, review and approval.

Recodified to IMC 16.26.

~~A. Unless otherwise specified in this chapter, all standards, methods and requirements shall be in accordance with the Surface Water Design Manual.~~

~~B. Plan and Report Submittal. Drainage plans, supporting technical analyses and other required documentation shall conform to the reporting requirements contained in the Surface Water Design Manual.~~

~~C. Where to Submit. All storm drainage plans prepared in connection with any of the permits and/or approvals listed in IMC 13.28.030 shall be submitted for review and approval to the Permit Center.~~

~~D. All plans, drawings and calculations designed to control surface water and subsurface water, submitted to the City, will be prepared by a licensed professional engineer, registered in the State of Washington, and those plans, drawings and calculations will be stamped showing that engineer's registration.~~

~~E. Interpretation. The provisions of this chapter shall be held to be minimum requirements in their interpretation and application and shall be liberally construed to serve the purposes of this chapter.~~

~~F. More Strict Standard Applies. When any provision of any other ordinance of the City's regulations conflicts with this chapter, that which provides greater environmental protection shall apply unless otherwise provided for in this chapter.~~

13.28.050 Drainage review – Adjustments.

Recodified to IMC 16.26.

~~A. An adjustment to the requirements contained in this chapter or other requirements in the Surface Water Design Manual may be proposed. The resulting development shall be subject to all of the remaining terms and conditions of this chapter and the adjustment shall:~~

- ~~1. Produce a compensating or comparable result in the public interest; and~~
- ~~2. Meet this chapter's objectives of safety, function, appearance, environmental protection and maintainability based upon sound engineering judgment.~~

~~B. If meeting the provisions of subsection (A)(1) of this section will impose a severe and unexpected economic hardship, the best practicable alternative shall be obtained as determined by the Director according to the adjustment process defined in the Surface Water Design Manual.~~

~~C. Requests for adjustments that may conflict with the requirements of any other City department shall require review and concurrence with that department.~~

~~D. A request for an adjustment is a Level 0 Review Process as provided for in IMC 18.04.100.~~

~~E. The City will require monitoring of experimental designs and technology or untested applications proposed by the applicant in order to determine compliance with subsection (A)(1) of this section and the approved plans and conditions.~~

13.28.055 Drainage review – Adjustments for low impact development proposals.

Recodified to IMC 16.26

~~A. Authorized Adjustments from Design Standards. In order to achieve the goals of low impact development, the Director may approve adjustments to the standards referenced in the Issaquah Street Standards and other~~

chapters of the IMC under which the Director is authorized to approve such adjustments, as appropriate and necessary to achieve the goals. Adjustments that require approval under the Land Use Code, such as parking and landscaping standards, will require an administrative adjustment of standards as allowed for in the appropriate section of IMC Title 18, Land Use Code.

~~B. Requirements. The applicant shall provide justification, in an adjustment request to the Director, for each adjustment requested by demonstrating that the project meets all other requirements of the IMC and that such project has a reasonable assurance of long-term success. Adjustments shall be based on the following criteria:~~

- ~~1. The adjustment will provide substantially equivalent environmental protection;~~
- ~~2. The adjustment is based on sound engineering practices, and the objectives of safety, function, environmental protection and facility maintenance are met;~~
- ~~3. The adjustment contributes to and is consistent with the goal of minimizing the effective impervious area within a development to the maximum extent practicable;~~
- ~~4. The proposed development project offers a reasonable assurance that the goals of low impact development will be achieved and maintained;~~
- ~~5. The adjustment does not threaten public health or safety;~~
- ~~6. The adjustment is consistent with generally accepted engineering and design practices and reflects, at a minimum, design practices in accordance with the 2005 Puget Sound Action Team Low Impact Development Technical Guidance Manual for Puget Sound and subsequent modifications and any guidance or requirements issued by the Department of Ecology;~~
- ~~7. The adjustment promotes 1 or more of the following:~~
 - ~~a. Innovative site or housing design or layout;~~
 - ~~b. Increased on-site stormwater retention using native vegetation;~~
 - ~~c. Retention of at least 60 percent of natural vegetation conditions over the site;~~
 - ~~d. Improved on-site water quality beyond that required by current applicable regulations;~~

~~e. Retention or re-creation of predevelopment and/or natural hydrologic conditions to the maximum extent possible;~~

~~8. The adjustment does not allow density greater than what would otherwise be allowed under City regulations then in effect;~~

~~9. The adjustment does not present significantly greater maintenance requirements at facilities that will be eventually transferred to public ownership;~~

~~10. There shall be submitted in conjunction with each such project, covenants, conditions and restrictions which will be binding upon the property all necessary native growth protection easements, impervious surface restrictions and such other critical features as the Director may require.~~

~~C. Evaluation and Monitoring. The Director may require that applications for approval of a project pursuant to the terms of this section be accompanied by a proposed monitoring and evaluation process designed to measure the performance of specific elements addressed in the adjustments sought for the project.~~

13.28.060 Construction – Timing.

Recodified to IMC 16.26.

~~A. Erosion and sediment control measures associated with both the interim and permanent site conditions shall be:~~

~~1. Constructed in accordance with the approved plan prior to any grading or land clearing other than that associated with an approved erosion and sediment control plan;~~

~~2. Satisfactorily sequenced and maintained until all improvements, restoration, and landscaping associated with the permit and/or for the project are completed, and the potential for on-site erosion has passed.~~

~~B. Prior to the construction of any improvements and/or buildings on the site, those portions of the drainage facilities necessary to accommodate the control of surface and stormwater runoff discharging from the site shall be constructed and in operation. Recording of formal and administrative subdivisions may occur prior to the construction of drainage facilities when approved in writing by the Director only to minimize impacts that may result from construction during inappropriate times of the year.~~

13.28.070 Construction – Required bonds and liability insurance.

Recodified to IMC 16.26.

~~A. The Public Works Engineering Department is authorized to require all persons constructing drainage facilities that are to be maintained by the City as provided for under IMC 13.28.080 to post with the Director cash and surety bonds to cover the cost of defects in materials, workmanship, and installation, and to correct maintenance deficiencies during the initial 2-year maintenance period following satisfactory completion of the facilities. Posting of such bonds shall be consistent with the City of Issaquah administrative policy for security deposits.~~

~~B. The person constructing the facility shall maintain a liability policy during the initial 2-year maintenance period, up until the point in time when the City assumes maintenance responsibilities (in accordance with IMC 13.28.080), with limits no less than \$1,000,000 combined single limit per occurrence and \$2,000,000 aggregate for personal injury, bodily injury and property damage, and shall name the City of Issaquah as an additional insured. A copy of the endorsement naming the City as additional insured shall be attached to the certificate of insurance, and shall be provided to the City prior to commencement of the work.~~

13.28.080 Maintenance – Drainage Stormwater facilities accepted by the City for maintenance.

The City is authorized to assume the maintenance of ~~drainage facilities~~ stormwater facilities and stormwater treatment and flow control BMPs/Facilities approved and constructed following the requirements of IMC Chapter 16.26 after the expiration of the 2-year maintenance period in connection with the subdivision of land if:

- A. All of the requirements of IMC 16.26 ~~13.28.070~~ have been fully complied with;
- B. The facilities, as designed and constructed, conform to the provisions of this chapter;
- C. The facilities have been inspected and approved by the Department after their second year of operation;
- D. All necessary easements or dedications entitling the City to properly access, operate, and maintain the facilities have been recorded with the King County Recorder's Office, and a copy has been conveyed to the City;

E. A ~~drainage-stormwater~~ facility or stormwater treatment and flow control BMP/Facility, which does not meet the criteria of this section, shall remain the responsibility of the applicant required to construct the facility and persons holding title to the property for which the facility was required.

13.28.090 Maintenance – Stormwater Drainage-facilities not accepted by the City for maintenance.

A. The person or persons holding title to the property and the applicant required to construct a ~~drainage stormwater~~ facility or stormwater treatment and flow control BMPs/Facility shall remain responsible for the facility's continual performance, operation and maintenance in accordance with the standards and requirements of the Department and remain responsible for any liability as a result of these duties. This requirement shall apply to all facilities not otherwise accepted by the City for maintenance in accordance with IMC 13.28.080. For facilities approved but not accepted by the City, a copy of the ~~o~~Operation and Maintenance manual prepared in accordance with the approved permit for the facility shall be retained on site or within reasonable access to the site, and shall be transferred with the property to the new owner. The Operations and Maintenance manual for the facility shall identify the equipment and access required for maintenance. All stormwater facilities and stormwater treatment and flow control BMPs/Facilities shall be accessible to maintenance vehicles and equipment.

B. The City is authorized to inspect ~~drainage-stormwater~~ facilities and stormwater treatment and flow control BMPs/Facilities and issue orders requiring maintenance and/or repair, replacement, or restoration in accordance with IMC 13.28.130. Failure to effect such maintenance and/or repairs, replacement, or restoration constitutes a violation of this chapter, and the penalties provided in Chapter 1.36 IMC shall be enforced against the person or persons holding title to the subject property served by the ~~drainage~~-facility.

C. Where not specifically defined in this section, the responsibility for performance, operation and maintenance of ~~drainage-stormwater~~ facilities, stormwater treatment and flow control BMPs/Facilities, and conveyance systems, both natural and constructed, shall be determined on a case-by-case basis.

13.28.100 Maintenance – Minimum standards.

A. Maintenance Required. All ~~drainage-stormwater~~ facilities and stormwater treatment and flow control BMPs/Facilities shall be maintained in accordance with this chapter and the ~~Surface Water~~-Stormwater Design Manual.

1. The Director shall establish inspection, scheduling, standards and compliance procedures for maintenance of all drainage stormwater facilities and stormwater treatment and flow control BMPs/Facilities.

2. Maintenance shall include removal of debris, sediment and vegetation, street sweeping, facility repairs or improvements or replacement, and other activities that are needed to ensure continued performance of the stormwater facility or stormwater treatment and flow control BMPs/Facility at a level commensurate with the original approved facility design. Maintenance standards for drainage stormwater facilities shall conform to the operation and maintenance plan contained ~~in the Surface Water Design Manual~~ in Volume V of the Ecology Stormwater Management Manual for western Washington.

3. The Director may develop additional maintenance requirements as necessary to comply with new Federal or State regulatory programs.

4. Utility cuts in permeable pavement or permeable concrete shall be backfilled with the same aggregate base used under the permeable pavement specification to allow continued conveyance of stormwater and treatment per permitted design, unless utility cut is so small that permeable asphalt/concrete batch is not available. System shall continue to meet performance for which it was designed.

B. Disposal of Waste from Maintenance Activities. Disposal of waste from maintenance activities shall follow all applicable Federal, State and local regulations.

13.28.115 Source Control Best mManagement pPractices for pollution source control.

A. Source Control BMP Requirements. Source control requirements are contained in the Stormwater Pollution Prevention Manual, which is also identified as Volume IV of the adopted 2014 Ecology Stormwater Management Manual for Western Washington.

A B. BMP Requirements.

1. The SPP Manual provides information on source control pollution prevention best management practices (BMPs) for commercial, industrial, multifamily residential, single-family residential, and public sites that shall be implemented in accordance with this chapter to reduce the contamination of stormwater, surface water, and groundwater.

2. All proposals for new development and redevelopment shall include source control pollution prevention BMPs as required by the ~~Surface Water~~ Stormwater Design Manual₂ and the SPP Manual.

3. In applying the SPP Manual to prohibited discharges from normal single-family residential activities, the Director shall use public education and technical assistance as the primary method of gaining compliance with this chapter. Enforcement action will be used if the Director determines:

a. The discharge from a normal single-family residential activity, whether singly or in combination with other discharges, is causing a significant contribution of contaminants to surface and stormwater or groundwater; or

b. The discharge from a normal single-family residential activity poses a hazard to the public health, safety or welfare, endangers any property or adversely affects the safety and operation of City right-of-way, utilities, or other City-owned or maintained property.

4. In applying the ~~SPP Manual~~ Source Control BMPs to prohibited discharges from existing commercial, industrial, multifamily and public sites, ~~the Director shall use public education and technical assistance as the primary method of gaining compliance with this chapter, unless the prohibited discharge is the result of a willful violation the City may require the application of operational or structural-~~ source control BMPs at any time through formal code enforcement for pollutant generating sources associated with existing land uses and activities where necessary to prevent illicit discharges. Failure to comply shall result in enforcement action in accordance with Chapter 1.36 IMC.

~~B-C.~~ Exemptions.

1. Persons implementing BMPs through another approved Federal, State, or local program will not be required to implement the BMPs prescribed in the SPP Manual, unless the Director determines that the other program's BMPs are ineffective at minimizing the discharge of contaminants. If the other program requires the development of a stormwater pollution prevention plan, the person shall make their plan available to the City upon request. Persons who qualify for exemptions include, but are not limited to, persons who:

a. Have obtained and are complying with a general or individual permit under the NPDES Stormwater Permit Program from the Washington State Department of Ecology;

- b. Are a public facility implementing BMPs in compliance with the stormwater management program of a NPDES municipal stormwater permit;
- c. Are voluntarily implementing other BMPs, which are equivalent measures, methods, or practices to the BMPs in the SPP Manual.

13.28.120 Hazards.

Whenever the Director determines that any existing construction site, erosion and sedimentation problem, developed parcel with runoff containing contaminants, and/or drainage facility poses a hazard to life and limb, endangers any property, endangers the health of aquatic life and/or habitat, and/or adversely affects the condition or capacity of other drainage facilities, the safety and operation of public right-of-way, utilities, waters of the State, and/or other property owned or maintained by the City, the applicant/person to whom the permit was issued pursuant to IMC [13.28.030](#), the owner of the property within which the drainage facility is located, the applicant/person responsible for maintenance of the facility, and/or other person or agent in control of said property, upon receipt of notice in writing from the Director shall within the period specified therein repair or otherwise address the cause of the hazardous situation in conformance with the requirements of this chapter.

Should the Director have reasonable cause to believe that the situation is so adverse as to preclude written notice, the Director may take the measures necessary to eliminate the hazardous situation; provided, that the Director shall first make a reasonable effort to locate the owner before acting. In such instances the applicant of whom a drainage plan was required pursuant to IMC [13.28.030](#), the owner of the property and/or the person responsible for the maintenance of the facility shall be obligated for the payment of all costs incurred. If costs are incurred and a financial guarantee pursuant to this chapter or other City requirement has been posted, the Director shall have the authority to collect against the financial guarantee to cover costs incurred.

13.28.130 Administration.

A. Administration.

1. Director. The Director shall administer this chapter and shall be referred to as the Director. The Director shall have the authority to develop and implement administrative procedures to administer and enforce this chapter.
2. Review and Approval. The Director may approve, conditionally approve, or deny an application for activities regulated by this chapter.

B. Inspections.

1. Authority. The Director is authorized to gain access to private property, make such inspections of ~~drainage-stormwater~~ facilities, and take such actions as may be required to enforce the provisions of this chapter.

2. Procedures for Entry to Private Property. Whenever necessary to make an inspection to enforce any of the provisions of this chapter, monitor for proper function of drainage facilities or whenever the Director has reasonable cause to believe that violations of this chapter are present or operating on a subject property or portion thereof, the Director may enter such premises at all reasonable times to inspect the same or perform any duty imposed upon the Director by this chapter; provided, that if such premises or portion thereof is occupied, the Director shall first make a reasonable effort to locate the owner or other person having charge or control of the premises or portion thereof and request entry. If after reasonable effort, the inspector is unable to locate the owner or other person having charge or control of the premises or portion thereof, and has reason to believe the condition of the stormwater system creates an imminent hazard, the inspector may enter.

3. Property Owner's Responsibility to Provide and Maintain Access to ~~Drainage-stormwater f~~Facilities. Proper ingress and egress to any drainage facility shall be provided to the Director to inspect, monitor or perform any duty imposed upon the Director by this chapter. The Director shall notify the responsible person in writing of failure to comply with this access requirement. Failure to maintain and provide proper ingress and egress to ~~drainage-stormwater~~ facilities shall result in enforcement action in accordance with IMC [13.28.135](#).

C. Orders.

1. Authority. The Director is authorized to issue to an owner or persons representing an owner an order to maintain or repair a drainage facility to bring it into compliance with this chapter.

2. Procedure. The order shall include:

a. A description of the specific maintenance or repair needed to bring the ~~drainage-stormwater~~ facility into compliance with this chapter;

b. A reasonable time to comply, depending on the circumstances;

c. Penalties that may be incurred by any owner of a drainage facility not in compliance with this chapter; and

d. Any required structural repairs to a drainage facility are subject to approval by the Director.

13.28.135 Enforcement.

The violation or failure to comply with any of the provisions of this chapter is unlawful. The remedies provided in this section, whether civil or criminal, shall be cumulative and shall be in addition to any other remedy provided by law.

A. Civil Remedies. Any work or other activities which are within the authority of this chapter performed without a permit or in violation of any lawful order or requirement of the Public Works Director is deemed to be a public nuisance and may be abated in a manner prescribed by the ~~Permit Authority~~ Director. Injunction proceedings or other appropriate action may be initiated in a court of competent jurisdiction against any person who violates or fails to comply with the provisions of this chapter in order to prevent, enjoin, abate or terminate violations of this chapter or to restore the property to its original conditions, as nearly as practicable.

B. Persons Subject to Penalty. Any person who violates or fails to comply with the requirements of this chapter or who fails to conform to the terms of an approval or order issued by the Director shall be subject to the civil and criminal penalties provided in Chapter [1.36](#) IMC, Code Enforcement. Each day of continued violation shall be considered a separate violation for purposes of penalty.

C. In addition, any person convicted of a violation(s) of this chapter shall be required to abate any conditions on the subject property in a manner which will achieve full compliance with this chapter and restore any property to its original condition, as nearly as practicable.

D. Reinspection Fees. In addition to criminal and civil penalties, the Director may impose a reinspection fee for any account or storm drainage facility found not to be in compliance of this chapter. The inspection fee shall be independent of any current or future penalties that may be incurred by the property owner for noncompliance of this chapter. (Ord. 2560 § 2 (Exh. A1), 2009; Ord. 2288 § 2, 2000. Formerly 13.28.130(E)).

E. The City may require operational or structural source control BMPs at anytime to reduce or eliminate pollutants and non-stormwater discharges.

F. Reimbursement for Abatement. If the City of Issaquah utilizes City funds, equipment, or staff to correct a non-stormwater discharge, abate pollution from the stormwater drainage system, or remove/disconnect an illicit connection, the City will charge the responsible person for those expenses incurred.

13.28.140 Appeals.

The final decision of the development permit under which drainage review is required in accordance with IMC [13.28.030](#), including the specific requirements and conditions of this chapter, is appealable. Guidelines and procedures for such appeals shall follow the appeal process contained in Chapter [18.04](#) IMC, Procedures.

13.28.150 Severability.

If any provision of this chapter or its application to any person or property is held invalid, the remainder of the chapter or the application of the provision to other persons or property shall not be affected.

Chapter 16.26
CLEARING, AND GRADING, AND STORMWATER MANAGEMENT

Sections:

- 16.26.010 Purpose.
- 16.26.020 Description.
- 16.26.030 Definitions.
- 16.26.040 Permit required.
- 16.26.050 Regulations.
- 16.26.060 Application – Review.
- 16.26.080 Adjustments and Variances.
- 16.26.090 Appeals.
- 16.26.100 Permit fees.
- ~~16.26.110 Expiration of permits and applications.~~
- 16.26.120 Security.
- 16.26.130 Indemnification.
- 16.26.135 Insurance.
- 16.26.140 Notification of completion.
- 16.26.150 Stop work orders/permit revocation.
- 16.26.160 Obligation of person performing work.
- 16.26.170 Project inspection.
- 16.26.180 Notice to proceed authorized.
- 16.26.185 Conversion of property from forestry practices – Six (6) year moratorium on nonforestry development.
- 16.26.190 Enforcement.

16.26.010 Purpose.

The purpose of this chapter is to promote, protect and preserve the public interest by regulating land alteration, particularly the clearing and grading of land and stormwater runoff impacts of land development in the City.

This chapter is necessary in order to provide development regulations and construction procedures for protecting and preserving the natural qualities of lands and watercourses within the City; to minimize water quality degradation and the sedimentation of creeks, streams, ponds, lakes, wetlands and other water bodies;

to minimize the impact of increased runoff, erosion and sedimentation caused by ~~improper~~ land development and maintenance practices; to preserve and enhance, to maintain and protect groundwater resources; to minimize adverse effects of alterations in ground and surface water quantities, locations and flow patterns; to promote safety upon City roads and rights-of-way; to decrease potential landslide, flood and erosion damage to public and private property; and to promote site planning and building practices which are consistent with the City's natural topographical, ~~vegetational~~ vegetation and hydrological features while allowing for the removal of vegetation and grading activities.

This chapter is intended to require that development in environmentally critical areas be accomplished in a manner which protects those areas from damage or degradation.

This chapter is also intended to promote the health, safety and welfare of the public and nothing in this chapter is intended to or shall be deemed to create a duty in the City to protect or promote the interests of any particular person or class of persons. The existence of these regulations or any failure, refusal or omission of the City to enforce any provision in this chapter shall not prevent, supplant or affect the right of any person affected by the clearing and grading operations of another to invoke such private remedies as may be available against each other person.

16.26.020 Description.

This chapter sets forth rules and regulations to control land clearing, excavation, grading and earthwork construction, stormwater management systems and facilities, including cuts, fills, and embankments; establishes the administrative procedure for issuance of permits; provides for approval of plans and inspection of clearing, ~~and grading~~ and stormwater management projects; and provides for enforcement and penalties.

16.26.030 Definitions.

For the purpose of this chapter, the words set out in this section shall have the following meanings:

“Applicant” shall mean the individual, partnership, association or corporation applying for a permit to do the work under this chapter and includes property owners, employees, agents, consultants, contractors and successors in interest.

“Approval” means approval by the designated permit authority for ~~the clearing, and grading~~ and stormwater management permits.

“Area of Special Flood Hazard” means the land in the floodplain within the City subject to a 1 percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

“Best management practices” or “BMPs” means schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and structural or managerial practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

“Bioretention” means an engineered facility that stores and treats stormwater by passing it through a specified soil profile, and either retain or detain the treated stormwater for flow attenuation. Refer to the Stormwater Design Manual for bioretention BMP types and design specifications.

“Civil engineer” means a professional engineer licensed by the State of Washington in civil engineering.

~~“Civil engineering” means the application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works for the beneficial uses of mankind.~~

“Clearing” means the act of destroying or removing vegetation by mechanical or chemical means.

“Development” see definition for New Development or Re-Development or both.

~~“Director” means the Director of Public Works Development Services Department or an authorized agent of the Public Works Department~~ his or her designee.

“Drainage” means the collection, conveyance, containment and/or discharge of surface and stormwater runoff.

“Drainage facility” means a constructed or engineered feature that collects, conveys, stores or treats surface and stormwater runoff. Drainage facilities shall include, but not be limited to, constructed or engineered streams, pipelines, channels, ditches, gutters, stormwater flow control or water quality BMP/ treatment facilities, infiltration facilities, erosion and sediment control facilities and other structures and appurtenances that provide for drainage.

“Drainage review” means an evaluation by City of Issaquah permit review staff of a proposed project's compliance with the drainage requirements in the Stormwater Design Manual, references in the Stormwater

Design Manual such as basin plans and critical drainage areas, other requirements stated in this chapter, other applicable requirements of the Issaquah Municipal Code including the critical areas regulations (Chapter 18.10 IMC), and conditions of development or environmental permits issued for the project.

"Ecology Stormwater Management Manual", see Stormwater Design Manual.

"Environmentally critical lands" include, but are not limited to, the following:

1. Critical areas and their buffers as defined in Chapter 18.10 IMC;
2. Other areas which may be identified by the City in accordance with the provisions of the State Environmental Policy Act.

"Excavation" means the physical, manmade removal of earth material.

"Existing grade" means the land surface elevation prior to grading activity.

"Existing site" means the site prior to any clearing and grading activity or any site prior to the passage of the ordinance codified in this chapter.

"Fill" means a deposit of earth material placed by artificial means which increases the ground surface elevation.

"Finished grade" means the land surface elevation of the site after alterations are completed.

"Flow control facility" means a drainage facility designed to mitigate the impacts of increased surface and stormwater runoff generated by site development pursuant to the drainage requirements in this chapter. Flow control facilities are designed either to retain water for a considerable length of time and then release it by evaporation, plant transpiration and/or infiltration into the ground or to detain runoff for a short period of time and then release it to the conveyance system.

~~"Geotechnical engineer" means a professional civil engineer licensed by the State of Washington who is qualified by reason of experience and education in the practice of evaluating and predicting the engineering properties of soils and geologic formations or a professional engineering geologist licensed by the State of Washington.~~

"Grade" means the vertical elevation of the ground surface.

"Grading" means any act which changes the elevation of the ground surface.

“Green belt” means an open area which may be landscaped or maintained in a natural state surrounding development or used as a buffer between land uses or maintained as the edge of an urban or developed area.

“Grubbing” means the act of root vegetation removal from beneath the ground surface.

“Impervious surface” means a non-vegetated surface which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development or that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roofs, walkways, patios, driveways, parking lots, storage areas, areas which are paved, graveled or made of packed or oiled earthen materials or other surfaces which similarly impede the natural infiltration of surface and stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for purposes of determining whether the thresholds for the application of minimum requirements are exceeded. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling.

“Low impact development” means a stormwater management and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation, and transpiration by emphasizing conservation, use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design.

“Low impact development Best Management Practices” means distributed stormwater management practices, integrated into a project design, that emphasize pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration. LID BMPs include, but are not limited to, bioretention, rain gardens, permeable pavements, roof downspout controls, dispersion, soil quality and depth, vegetated roofs, minimum excavation foundations, and water re-use.

“Maintenance”. means rRepair and maintenance activities conducted on currently serviceable structures, facilities, and equipment that involves no expansion or use beyond that previously existing and results in no significant adverse hydrologic impact. It includes those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems. Those usual activities may include replacement of dysfunctional facilities, including cases where environmental permits require replacing an existing structure with a different type structure, as long as the functioning characteristics of the original structure are not changed. In regard to stormwater facilities, maintenance includes assessment to ensure ongoing proper operation, removal of built up pollutants (i.e., sediments), replacement of failed or failing treatment media, and other actions taken to correct

defects as identified in the maintenance standards of Chapter 4, Volume V of the Stormwater Management Manual for Western Washington (SWMMWW).

“Minimum Requirements” refers to the Minimum Requirements in the Stormwater Design Manual.

“Native growth protection easement (NGPE)” means an easement granted to the City for the protection of native vegetation within a critical area or its associated buffer.

“New development” means land disturbing activities, including Class IV -general forest practices that are conversions from timber land to other uses; structural development, including construction or installation of a building or other structure; creation of hard surfaces; and subdivision, short subdivision and binding site plans, as defined and applied in Chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development.

“Permit” means a permit authorizing clearing, grading and stormwater management, issued as part of Site Work Permit, Building Permit, Landscaping Permit, or as a component of any other permit that authorizes land disturbance.

“Permit Authority” means the Director of ~~Public Works~~ Development Services Department or her or his designee. He/she may designate subordinates to make approvals, sign permits and carry out other responsibilities in application of this chapter.

“Permittee” means the person(s) or entity to whom a permit is issued for clearing and/or grading purposes.

“Pervious Surface” means a surface material that allows stormwater to infiltrate into the ground. Examples include lawn, landscape, pasture, native vegetation areas, and permeable pavements.

“Pollution-generating impervious surface” means an impervious surface considered to be a significant source of pollutants in surface and stormwater runoff. Such surfaces include those subject to vehicular use, industrial activities, or storage of erodible or leachable materials; wastes or chemicals and which receive direct rainfall or the run-on or blow-in of rainfall. Thus, a covered parking area would be included if runoff from uphill could regularly run through it or if rainfall could regularly blow in and wet the pavement surface. Metal roofs are also considered pollution-generating impervious surface unless they are treated to prevent leaching.

“Pollution-generating pervious surface” means a nonimpervious surface considered to be a significant source of pollutants in surface and stormwater runoff, including surfaces subject to use of pesticides and fertilizers, to the use or storage of erodible or leachable materials, wastes or chemicals or to the loss of soil. Such surfaces

include, but are not limited to, permeable pavement subject to vehicular use, lawn and landscaped areas including, golf courses, parks and sports fields (natural and artificial).

“Redevelopment project” means, on a site that is already substantially developed (defined as having 35 percent or more of existing hard surface coverage), the creation or addition of hard surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of hard surface that is not part of a routine maintenance activity; and land disturbing activities.

“Registered professional” means a person currently licensed by the State to practice in engineering, engineering geology, geology, hydrogeology, architecture, landscape architecture or surveying.

“Regulatory agencies” means appropriate departments of a governmental body with permitting or decision-making authority relative to an action.

“Replaced hard surface” means, for structures, the removal and replacement of impervious surfaces down to the foundation. For other hard surfaces, the removal down to bare soil or base course and replacement.

“Rough grading” means clearing, grading and construction stormwater management activities to achieve project boundaries and approximate earthen grades in accordance with an approved plan that are permitted for construction prior to issuance of all final site work and use, building, and other permits required for a proposed project. Also includes associated activities that are required prior to rough grading such as demolition and pre-loading.

“Runoff” means water originating from rainfall and other precipitation that is found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes and wetlands as well as shallow groundwater as well as on ground surfaces. For the purposes of this definition, “groundwater” means all waters that exist beneath the land surface or beneath the bed of any stream, lake or reservoir, or other body of surface water, whatever may be the geological formation or structure in which such water stands or flows, percolates, or otherwise moves.

“Significant trees” are any trees at least 30 feet tall or 6 inches in caliper at 4.5 feet above ground.

“Site” means that defined portion of any lot(s) or parcel(s) of land or contiguous combination thereof, where clearing or grading is performed or permitted subject to new development or redevelopment. For road projects, the length of project site and right-of-way boundaries define the site.

“Slide” means the movement of a mass of loosened rocks or earth down a hillside or slope.

“Slope” means an inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance or as an angle from the horizontal.

“Source control BMP” means a structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. The Ecology Stormwater Management Manual for Western Washington separates source control BMPs into two types. Structural Source Control BMPs are physical, structural, or mechanical devices, or facilities that are intended to prevent pollutants from entering stormwater. Operational BMPs are non-structural practices that prevent or reduce pollutants from entering stormwater.

“Stormwater Design Manual” and means the Department of Ecology 2014 Stormwater Management Manual for Western Washington, prepared by the Department of Ecology, as supplemented and modified by the City of Issaquah 2016 Addendum to the Department of Ecology 2014 Stormwater Management Manual for Western Washington that specifies local requirements and procedures, describing surface and stormwater design and analysis requirements, procedures and guidance.

“Stormwater” means runoff during and following precipitation and snowmelt events, including surface runoff, drainage or interflow.

“Stormwater facility” means a constructed component of a stormwater drainage system, designed or constructed to perform a particular function, or multiple functions. When used singly or in combination, stormwater facilities reduce the potential for contamination of surface and/or groundwaters. Stormwater facilities include, but are not limited to, pipes, swales ditches, culverts, street gutters, detention ponds, retention ponds, constructed wetlands, infiltration devices, catch basins, oil water separators, and biofiltration swales.

“Stormwater treatment and flow control BMPs/Facilities” means detention facilities, treatment BMPs/facilities, bioretention, vegetated roofs, and permeable pavements that help meet Appendix 1 Minimum Requirements #6 (treatment), #7 (flow control), or both.

16.26.040 Permit required.

A. Permit Required: Any land disturbing activity that involves clearing, grading, or creation or modification of a stormwater management facility requires approved plans and permit(s), unless such activity is determined to be exempt from obtaining a permit as provided below. Activity requiring a permit is authorized under a Site Work Permit, Building Permit, Landscaping Permit, or as a component of any other permit that authorizes land

disturbance if City-approved drawings and associated technical reports for such activities are included under the other permit.

~~A. No person shall make changes or cause changes to be made in the surface of any land by grading, excavating, clearing or disturbing the natural topsoil, vegetation other than trees, thereon without first obtaining a valid Public Works Permit allowing clearing and grading or having ascertained that a valid permit has been issued, except as provided in the following exemptions, and except where other permits have been issued to perform activities which additionally permit clearing and grading under the specific conditions set forth in such permits.~~

~~B. When an application for clearing and grading is submitted to the City, it shall be accompanied by a tree plan as required by Chapter 18.12 IMC, and a temporary erosion and sediment control (TESC) plan that complies with the requirements in Chapter 13.28 IMC, Stormwater Management Policy, and Chapter 16.30 IMC, Erosion and Sediment Control.~~

~~C. Within 28 days of receipt of such application and plans, the Director of Public Works shall make a complete application determination in accordance with IMC 18.04.150, Complete application — Sufficiency review.~~

~~D.~~ B. Permit Exemptions. The following activities are exempt from compliance with this chapter:

1. An excavation below finish grade for basements and footings of a building retaining wall or other structure or activity authorized by any valid building permit. This shall not exempt any fill made with the material from such excavation nor exempt any excavations having an unsupported height greater than 5 feet after the completion of such structure. See also IMC 16.26.050(B)(4);

2. Maintenance. Activities that considered are to be maintenance include: ~~The clearing by a public agency within a public right-of-way or upon an easement, for the purpose of installing and maintaining water, storm, or sanitary sewer mains. The clearing by a franchised utility within a public right-of-way for the purpose of installing and maintaining power, gas or communication lines;~~

a. Underground utility projects: underground utility projects that replace the ground surface with in-kind material or materials with similar runoff characteristics are only subject to Minimum Requirement #2, Construction Stormwater Pollution Prevention.

b. Pavement maintenance: pothole and square cut patching, overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage, shoulder grading, reshaping/regrading drainage systems, crack sealing, resurfacing with in-kind material without increasing impervious surface area, pavement preservation activities that do

not increase impervious surface area, and vegetation maintenance. If removing and replacing a paved surface to base course or lower, or repairing the pavement base, Minimum Requirements #1 - #5 apply subject to applicable thresholds.

c. Other routine maintenance. Includes activities conducted by a public agency within a public right-of-way or upon an easement for the purposes of maintaining water, storm, sanitary sewer, transportation, and other facilities, and by a franchised utility for the purposes of maintaining power, gas or communication facilities, as needed to maintain function in accordance with original purpose, design, size and location of the facility. Also includes replacement of hard surfaces that is part of a routine repair or maintenance activity, and minor upgrades to failing or substandard systems using BMPs if needed to improve functionality but not resulting in an expansion of the utility system. Also includes maintenance of existing private stormwater systems as required by IMC 13.28. (See also definition of "maintenance").

3. The cutting of ~~nonprotected, protected and significant~~ trees as defined in Chapter 18.12 IMC and Central Issaquah Development and Design Standards Chapter 10.0 where a Tree Removal Notice or Tree Removal Permit is exempt or required. ~~(All tree removal activity must be permitted by the City under Chapter 18.12 IMC);~~

4. Routine landscape maintenance involving not more than 30 cubic yards of excavation and fill on a single parcel of property within a consecutive 12-month period;

5. Landscape installation where fill is confined to less than 1 foot of topsoil or landscape berms not exceeding 4 feet in height and 30 cubic yards in volume with side slopes flatter than 3 feet horizontal to 1 foot vertical (33 percent);

6. Emergency situations involving immediate danger to life or property, substantial fire hazards or other public safety hazards within 7 days of the onset of the emergency or during the period covered by an emergency declaration by the City; provided verbal authorization is provided by the City and followed up with written authorization communicating the need and verifying the nature of the emergency;

7. In any 12 consecutive months an excavation of less than 50 cubic yards of materials which:

a. Is less than 2 feet in depth; or

b. Which does not create a cut slope greater than 5 feet in height and steeper than 2 horizontal feet to 1 vertical foot;

8. Routine agricultural activities such as plowing, harrowing, disking, ridging, listing, leveling and similar operations to prepare a field or crop;

9. Clearing or grading less than 1,000 square feet where the existing zoning is single-family residential;

10. The fill or excavation of less than 500 cubic yards or clearing of less than 6,000 square feet in association with mineral resource extraction or processing in a mineral resource zone ("M") regulated by IMC [18.07.525](#);

11. Cemetery graves;

12. Except for subsections (D)(2) for maintenance only, (D)(6), and (D)(10) of this section, the exemptions set forth in this section shall not apply to activity within critical areas and associated buffers as defined by Chapter [18.10](#) IMC;

13. Removal of nonnative invasive plant species from environmentally critical lands and native growth protection easements in accordance with IMC [18.10.400](#);-

14. Development activities that are exempt or fall below the thresholds of all requirements contained in the Stormwater Design Manual.

~~E. C. Expiration of Inactive Applications. Public Works Site Work Permit applications for clearing and grading shall be closed by the Permit Center and deemed "inactive" if there has been no applicant activity for any 6-month period after the date the application is deemed sufficient, or from the date the active permit was issued, or within a specified time which has been mutually approved in writing by the applicant and the Permit Center. The applicant shall be responsible for notifying the Permit Center, in writing, if delays or unforeseen circumstances are impacting the completion of the application and review process. If an application file or permit has been closed by the Permit Center, the applicant must submit a new application and fee based on the rules and regulations of the currently adopted code in order to begin the review process of that proposed development in accordance with IMC 18.04.220(D)(2).~~

F. D. Expiration of Issued Permit: Issued Permits for clearing, grading and stormwater management shall expire in accordance with IMC 16.04 Section 105.5 "Expiration".

16.26.050 Regulations.

It is the intent of this section to promote practices consistent with the City's natural topographic, ~~vegetational~~vegetation, and hydrologic features, and to control substantial land alterations with associated stormwater impacts in accordance with the following adopted manuals. ~~In considering whether to issue a permit, and in considering whether and what type of conditions should be imposed thereon, the Permit Authority shall apply the following standards and criteria:~~

~~A. Permit Issuance. A public works permit for clearing and grading shall be issued only in conjunction with 1 or more of the following:~~

~~1. Project permits as defined in IMC 18.02.180 including: building permits, shoreline substantial development permits, site development permits, and other land use and environmental permits and licenses required from the City; and for development in the Community Facilities — Facilities and Community Facilities — Recreation zones when all of the following criteria are met:~~

~~a. A complete land use application has been filed with and accepted by the Permit Center; and~~

~~b. A drainage plan and or stormwater site plan and a temporary erosion and sediment control (TESC) plan that complies with the requirements in Chapter 13.28 IMC, Stormwater Management Policy, and Chapter 16.30 IMC, Erosion and Sediment Control, has been reviewed and approved by the Director; and~~

~~c. A critical areas study consistent with IMC 18.10.410 has been reviewed and approved and no filling, clearing or grading is proposed within a critical area or critical area buffer; and~~

~~d. All fill material shall be approved by the Director and graded to approved uniform contours; and~~

~~e. SEPA review of the project is complete, including the issuance of the final environmental impact statement if required;~~

~~2. Approved street, water, storm and sanitary sewer construction drawings for a preliminary plat or approved short plat; provided, that approval will only be given for infrastructure construction, not for the clearing or grading of an individual building site;~~

~~3. Utility extension approved by the Director;~~

~~4. Property access road to existing developed property;~~

~~5. Activities requiring the issuance of a permit for clearing and grading on existing developed property;~~

~~6. Special permission of the Permit Authority for site work under 500 cubic yards based on a demonstration that extenuating circumstances are present, that the project is consistent with the intent and purposes of this chapter, and only in conjunction with a clearing, grading and drainage plan with erosion and sedimentation control, landscaping, soil stabilization and surface groundcover elements including continuous maintenance.~~

A. Adopted Manuals. Design standards contained in the following manuals are adopted by reference:

1. Stormwater Design Manual. Thresholds, definitions, and minimum requirements within Volumes I through V are found in the 2014 Washington State Department of Ecology Stormwater Management Manual for Western Washington. These requirements are based on Appendix 1 of the Western Washington Phase II Municipal Stormwater Permit.

2. City of Issaquah Addendum. The City of Issaquah Addendum to the 2014 Washington State Department of Ecology Stormwater Management Manual for Western Washington contains local modifications and application of the definitions, thresholds, and minimum requirements in Issaquah.

B. The design, construction, and maintenance of all clearing, grading, and stormwater management systems and facilities shall comply with the requirements and design standards contained in the following documents:

1. This Chapter; and

2. The adopted Stormwater Design Manual and Addendum, and Source Control BMP's; and

3. Any other applicable construction specifications, design standards and details approved under the authority of the Issaquah Municipal Code as they pertain to permitting, construction, inspection, maintenance, and enforcement of land development activities and facilities.

C. Approval Criteria and Standards: In considering whether to issue a permit, and in considering whether and what type of conditions should be imposed thereon, the Director shall apply the following standards and criteria:

1. Rough Grading. The Director may issue a permit for a rough grading project when all the following criteria are met:

a. All land use permits are issued;-

1. Other agency permits are issued, -if required, (e.g., Hydraulic Project Approval);

2. Site plan including conceptual utility layout are submitted;

3. SEPA review for the entire project is completed (if required);

4. Clearing, grading and temporary erosion control construction plans are submitted;

5. Preliminary stormwater plan including stormwater technical information report with low impact development feasibility assessment are submitted;

6. Resolution of all project feasibility issues (i.e., required off-site easements and improvements, significant utility design issues, etc.) as determined by the Director.

7. For work to be authorized during a Land Use permit appeal period, all conditions of IMC 18.04.260, Permit Issuance Prior to Expiration of the Appeal Period, are met.

~~B-2.~~ Clearing. All clearing of vegetation shall conform to the following criteria~~specifications of this section~~, unless such clearing qualifies as an exemption under IMC 16.26.040(D)(B).

~~4-a.~~ Existing vegetation shall be preserved, replaced or restored in accordance with the approved landscaping plans and in accordance with Chapter 18.12 IMC or Central Issaquah Standards, Chapter 10.0, whichever applies.

~~2-b.~~ Except where clearing is permitted under IMC 16.26.040(D)(B)(12) "Exemptions", no clearing shall be allowed in any protected areas including an environmentally critical area, native growth protection easement, protected trees, greenbelt, open areas, or areas of native vegetation within the development site that are not part of the development proposal, without a ~~Public Works Permit for clearing and grading~~ and such other approvals as may be required by the Issaquah Municipal Code.

~~3-c.~~ ~~No clearing shall be allowed in any designated native growth protection easement, critical area or greenbelt without a Public Works Permit for clearing and grading and such other approvals as may be required by the Issaquah Municipal Code.~~ Prior to any clearing activity and during all construction-related activities ~~The limits of clearing the native growth protection easement, critical area or greenbelt shall be fenced during all construction-related activities or per the requirement of the related permits as follows prior to any clearing adjacent to any native growth protection easement or greenbelt:-~~

~~a. Protected areas such as native growth protection easements (NGPE), wildlife corridors, or wetlands shall be posted with permanent signs at the boundaries of the protected area. Design and location of the protective signs shall be approved by the Permit Authority.~~

~~b. Protective fencing with temporary signs shall be installed around all critical areas including, but not limited to, NGPE, wildlife corridors, or wetlands prior to any construction, or as required by the Permit Authority.~~

i. Protective fencing with temporary signs shall be installed around all environmentally critical areas (including streams, wetlands, steep slopes and their respective buffers), native growth protection easements (NGPE's), protected trees, greenbelt, areas of native vegetation within the development site that are not part of the development proposal, or other areas of the property or site that is separate from the development proposal and

should remain undisturbed as determined by the Director. Design and location of the protective signs shall be approved by the Director.

6-ii. Protective fencing shall be installed around the critical root zone of all trees to be saved in accordance with the approved tree plan prior to any construction. The fencing location may be changed to the dripline or other location as recommended by a certified arborist and approved by the Director.

6-iii. For any construction activities permitted within 100 feet of a critical area buffer or protected tree, the applicant may be required to hire an independent qualified professional, acceptable to the Permit Authority/Director, to be on site during construction to ensure construction does not exceed the limits indicated on this permit. Following construction activities, a licensed surveyor shall submit an affidavit to the Permit Authority/Director attesting that the construction was contained within the approved limits.

~~4. No clearing shall be allowed on any property, including single family lots without meeting the requirements set forth in this section and IMC 16.26.060.~~

5-d. In no case shall the period between the completion of work authorized under this chapter and final and complete restorative vegetation planting for a given project or project phase be more than 1 year unless an acceptable assurance device is posted in accordance with IMC 18.04.230. The planting shall restore the vegetation on the site to the new approved plans or, if no new approved plans, then to a condition equal to or better than the pre-cleared condition to the maximum extent possible as determined by the Director/Permit Authority. See also IMC 16.26.050(D)(5).

~~6. Rockeries are considered to be an erosion protection method and may be used to protect cut slopes of up to 8 feet in height or fill slopes of up to 3 feet in height if constructed in accordance with the street standards. Cut or fill slopes of up to 12 feet in height may be protected by a rockery if a civil engineer or engineering geologist evaluates the slope and demonstrates with engineering calculations as outlined in the development standards that the cut or fill slope is suitably stable to be protected by a rockery. The civil engineer or engineering geologist shall also provide recommendations for rockery construction. Construction observation reports shall be submitted by the civil engineer or engineering geologist prior to acceptance of the project by the City.~~

~~7. Final Reports. Upon completion of the work, a mylar as-built drawing stamped by both a registered Washington professional engineer and licensed surveyor, of all infrastructure (water, sewer, and stormwater utilities and roads) that will be owned and operated by the City or are connected to the City's system shall be required. No matter who owns or operates the stormwater infrastructure or where it discharges, the as-built mylars should show the stormwater facilities. In addition to the mylar as-built drawings, the permit holder is responsible to provide the City with an AutoCad drawing of the~~

as-built conditions in a format determined by the City upon completion of the work. The Permit Authority may require additional information in respect to any significant deviations from the approved plans, specifications or reports.

~~C-3.~~ Grading. Changes in the site topography shall conform to the following ~~restrictions~~ criteria:

~~1-a.~~ Fills, structures, and modifications of stream conveyances within in areas of special flood hazards shall conform to Chapter 16.36 IMC.

~~2-b.~~ The maximum surface grade on any artificially created slope shall not exceed ~~be~~ 23 feet horizontal run to 1 foot vertical fall (3H:1V). ~~The grade may be increased through engineering calculations to that grade which is stable with a 1.5 factor of safety. Cut and fill slopes for roadways may, however, be designed at 2H:1V upon review and approval by the Director provided it meets these criteria:~~

i. Engineering calculations to that grade show the slope is stable with a 1.5 factor of safety; and,

ii. Appropriate vegetation and irrigation is selected and installed in accordance with the recommendations of a qualified professional; and,

iii. Maintenance of the slope and vegetation is shown to safe and accessible for maintenance personnel; and,

iv. Other criteria reasonably related to the issue as determined by the Director.

~~3-c.~~ The permittee shall at all times protect improvements to adjacent private properties and public rights-of-way or easements from damage during grading operations. The permittee shall restore public improvements damaged by his/her operations to the standards in effect at the time of the issuance of the permit.

~~4-d.~~ If construction vehicles will be refueled on a construction site or the quantity of hazardous materials that will be used or stored on the construction site exceeds 20 gallons, exclusive of the quantity of hazardous materials contained in fuel or fluid reservoirs of construction vehicles, persons obtaining construction permits shall:

~~a-i.~~ Provide information to the ~~Public Works~~ Department regarding the types and quantities of hazardous materials that will be on site; and

~~b-ii.~~ Ensure that proper BMPs are used to prevent and respond to spills.

~~5-e.~~ An imported fill source statement is required with the ~~Clearing and Grading~~ Permit for all projects where more than 100 cubic yards of fill will be imported to a site. Fill material and soil

amendments shall not contain concentrations of contaminants that exceed cleanup standards for soil as specified in the Model Toxics Control Act (MTCA). The City may require analytical results to demonstrate that fill materials do not exceed cleanup standards when conditions are determined to require additional review. The imported fill source statement shall include:

~~a-~~ i. Source location of imported fill; and

~~b-~~ ii. Previous land uses of the source location.

f. Rockeries. Rockeries are considered an erosion protection method and may be used to protect cut or fill slopes.

i. Rockeries used to protect uncontrolled fill slopes may be no higher than four feet, as measured from the bottom of the base rock.

ii. Rockeries used to protect cut slopes or reinforced or engineered fill slopes may be up to a maximum height of 12 feet, as measured from the bottom of the base rock, with the approval of the Director. Any rockery that is over four feet high, as measured from the bottom of the base rock (cut slopes and reinforced or engineered fill slopes only) shall be designed by a geotechnical engineer.

iii. A wall drain must be provided for all rockeries greater than four feet in height as measured from the bottom of the base rock.

iv. The procedures and requirements in the City of Issaquah Street Standards relating to rockery design and construction must be followed, as well as any land use regulations and approvals.

v. The geotechnical engineer must provide construction monitoring and/or testing as required by the permit conditions, and submit construction inspection reports to the department for all rockeries that require design by a geotechnical engineer. For each project, or phase of a project, the geotechnical engineer must provide a final letter or report summarizing the results of the construction monitoring for each rockery, verifying that the rockery construction meets the geotechnical recommendations and design guidelines. The final letter or report must be submitted to the department prior to final inspection

g. Modular Block Walls and Other Retaining Walls. Modular Block Walls and other retaining wall structures may be used for erosion protection of cut or fill slopes, and to provide lateral support to vertical slopes of soil. The following pertains to all such retaining wall structures.

i. Wall structures over four feet in height as measured from the bottom of the base block must be engineered and designed by a professional civil or geotechnical engineer.

ii. A wall drain must be provided for all walls greater than four feet in height as measured from the bottom of the base structural element. Weepholes and filter drains may also be required to address drainage and hydrostatic pressure.

iii. All wall structures over four feet in height shall meet the minimum requirements set forth in the latest edition of the International Building Code.

iv. The geotechnical engineer must provide construction monitoring and/or testing as required by the permit conditions, and submit construction inspection reports to the department for all retaining walls that require design by a geotechnical engineer. For each project, or phase of a project, the geotechnical engineer must provide a final letter or report summarizing the results of the construction monitoring for each wall, verifying that the wall construction meets the geotechnical recommendations and design guidelines. The final letter or report must be submitted to the department prior to the final inspection.

v. Land use regulations and approvals may also impact wall design.

~~D-4. Drainage and Temporary Erosion and Sediment Control. All land disturbing clearing and grading activities shall make provisions for drainage and temporary erosion and sediment control as follows: pursuant to the requirements set forth in Chapter 13.28 IMC, Stormwater Management Policy, and Chapter 16.30 IMC, Erosion and Sediment Control.~~

a. A temporary erosion and sedimentation control (TESC) plan and associated required documentation shall meet the following requirements:

i. The TESC plan shall be prepared in accordance with, and be based on the best management practices contained in Minimum Requirement No. 2.

ii. The plan shall clearly indicate the construction sequence for establishment of all erosion control work, both temporary and permanent for the drier season and wetter winter months.

iii. The plan shall clearly show environmentally critical areas (including streams, wetlands, steep slopes and their respective buffers), native growth protection easements (NGPE's), greenbelt, open areas, or areas of native vegetation within the development site that are not part of the development proposal to be retained, soil preservation areas, and protection of existing trees and root systems during construction.

iv. The TESC plan shall provide a monitoring discharge point to allow turbidity monitoring of water being discharged from the site.

v. For projects other than Small Sites, as defined in the Stormwater Design Manual, the plan shall be designed by, and carry the seal of, a civil engineer having Certified Erosion and Sediment Control Lead (CESCL) certification.

vi. Erosion and sedimentation control devices shall be installed prior to initiation of construction activities and maintained by the permittee over the entire duration of the project until all possibility for erosion has passed and permanent vegetation has been established, as determined by the Director.

vii. Clearing and grading may be permitted to continue or to be initiated during the wet season (October 1-April 30) only if the Director grants specific approval per subsection ii of this section. In determining whether to permit wet season construction, the Director shall consult with DSD engineers and inspectors to determine whether the proposal ensures slope stability and adequately protects receiving waters from increased erosion and sedimentation during construction.

A) If clearing and grading is prohibited during the wet season, building construction can nonetheless proceed as long as no additional clearing and grading is performed and effective erosion control is in place and effectively maintained.

B) A wet season TESC Plan is required to be submitted to the Development Services Department by September 1st for approval to initiate or continue clearing and grading activity during the upcoming wet season. The Director may grant approval of the wet season TESC Plan based on evaluation of site conditions, the nature of the development activity, previous performance of the contractor, and other factors such as slope, soil type, hydrology, and proximity to receiving waters, as well as erosion control measures to prevent turbid runoff from leaving the site during construction.

C) If wet season clearing and grading is approved by the Director, and the Director subsequently issues a stop work order for insufficient erosion and sedimentation control, the wet season permit for clearing and grading activity may be suspended until the dry season.

D) When clearing and grading is suspended during the wet season or interrupted at any time of the year due to heavy rain or other reasons, the Permittee shall stabilize the site in accordance with the approved TESC Plan and maintain erosion control BMPs.

b. The TESC plan shall be designed to prevent, to the maximum extent practicable, the transport of sediment from the site to drainage facilities, surface waters, and adjacent properties. Turbidity in construction runoff at any monitoring point that exceeds 100 Nephelometric Turbidity Units (NTUs at any time up to the 10-year/24-hour storm event, as measured at the City's rain gauge, is considered a violation of the Permit, subject to stop work and enforcement as described in IMC 16.26.150 and IMC 16.26.190.

c. Updates to the TESC plan can be required at any time during the term of the Permit if the approved TESC plan is found to be ineffective or construction sequencing or other changed site conditions makes it necessary to modify the original TESC plan to make it compliant with the requirements of the Stormwater Design Manual.

d. Permanent erosion control shall be considered and set forth in the original design of the project to provide erosion control following completion of construction.

e. Vegetation shall be restored on those areas of the site disturbed by the land alteration activity which are not covered by permanent impervious surface improvement (e.g., buildings, parking lots, etc.) within 7 days of the completion of grading or clearing, unless seasonal or weather conditions are unfavorable. In this case, temporary erosion control measures shall be installed and maintained until restoration can be completed. The soils shall be stabilized in the area of vegetation restoration prior to that restoration and in compliance with other applicable soil restoration and landscaping requirements for the project.

f. Areas of disturbed soil that include lawn and landscape areas shall meet post-construction soil quality and depth per the Stormwater Design Manual and detailed in IMC 18.12.140 (P) and (Q), Landscape Code.

5. Stormwater Management. All land disturbing activities shall make provisions for drainage and stormwater management facilities as follows:

a. Thresholds. The thresholds for requiring drainage review are contained in the Stormwater Design Manual. The following thresholds invoke drainage review, to determine which specific criteria are triggered for flow control, runoff (water quality) treatment, low impact development, construction stormwater runoff, and other minimum requirements.

i. Land clearing: Any clearing not otherwise exempt from IMC 16.26.040(D)

ii. Hard surface area: 2000 square feet or more of new and replaced hard surface area

iii. Drainage: addition or modification of a 12" or larger diameter pipe

b. Minimum Requirements. Minimum requirements are contained in the Stormwater Design Manual, as modified by the City of Issaquah Addendum, and include the following elements:

- i. Minimum Requirement #1: Preparation of Stormwater Site Plan
- ii. Minimum Requirement #2: Construction Stormwater Pollution Prevention Plan (SWPPP)
- iii. Minimum Requirement #3: Source Control of Pollutants
- iv. Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls
- v. Minimum Requirement #5: On-site Stormwater Management
- vi. Minimum Requirement #6: Runoff Treatment
- vii. Minimum Requirement #7: Flow Control
- viii. Minimum Requirement #8: Wetlands Protection
- ix. Minimum Requirement #9: Operations and Maintenance

c. Stormwater Technical Information Report. Minimum Requirement #1 requires preparation of a stormwater site plan. The content of this plan is detailed in the Stormwater Design Manual, as modified by the City of Issaquah Addendum, the content of which is dependent on which minimum requirements are triggered. The plan must include the following chapters:

- i. Project Overview
- ii. Existing Conditions Summary and Site Analysis
- iii. Off-site Analysis Report
- iv. Permanent Stormwater Control Plan
- v. Construction Stormwater Pollution Prevention Plan (SWPPP)
- vi. Special Reports and Studies
- vii. Other Permits
- viii. Operation and Maintenance Manual
- ix. Declaration of Covenant for Privately Maintained Flow Control and Treatment Facilities
- x. Declaration of Covenant for Privately Maintained On-site Stormwater Management Facilities

xi. Bond Quantities Worksheet

d. Record Drawings. Upon completion of the work, a record drawing stamped by both a registered Washington professional engineer and licensed surveyor, of all infrastructure (water, sewer, and stormwater utilities and roads) that will be owned and operated by the City or are connected to the City's system shall be required. In addition, all private stormwater facilities shall also be shown regardless of ownership. The permit holder shall also provide the City with hard-copy of plan sheets, scanned copy of plan sheets, and an AutoCAD drawing file of the as-built conditions in a format determined by the City upon completion of the work. The Director may require additional information in respect to any significant deviations from the approved plans, specifications or reports.

e. Signage. Signs shall be installed at all permanent flow control, runoff treatment, and onsite stormwater management facilities that are required to be maintained, identifying purpose of the facility, owner, and contact phone number for maintenance. The design of the sign shall be approved by the City.

E-6. Clearing and Grading on Environmentally Critical Lands.

~~1-a.~~ Any activity governed by this chapter is prohibited on environmentally critical lands except (i) where clearing and grading is permitted under IMC 16.26.040(D)(42)(C), and (ii) except for activities conducted in connection with the approved use allowed under the Issaquah Land Use Code, ~~and only where such activity, in the opinion of the Permit Authority, can be accomplished in a manner which meets the following criteria:~~

~~a. Assures the protection and safety of property, public and private;~~

~~b. Is harmonious with the existing natural environment;~~

~~c. Will not result in significant erosion causing rilling, sedimentation, water quality degradation, and siltation on site or in downslope or downstream areas;~~

~~d. Assures long term slope and soil stability with minimum maintenance or replacement costs;~~

~~e. Provides reasonable financial assurance in a form approved by the permit provided.~~

~~2-b.~~ Essential public services will be permitted where no feasible alternative exists in which event the development shall be accomplished in a manner which assures the protection and safety of persons and property, public and private.

~~3-c.~~ For critical areas as defined in Chapter 18.10 IMC, special, more stringent conditions than otherwise provided for herein may be required by the Permit Authority ~~Director~~ if in the

opinion of the Permit Authority Director for reasons of health and safety, stability or environmental sensitivity, such special conditions are needed to mitigate adverse impacts.

~~4. Any person who alters a critical area as defined in Chapter 18.10 IMC without a permit, in violation of a permit, or in any way not permitted, and any property owner upon whose property such an area has been so altered, shall submit a plan for restoration to the Permit Authority. Upon approval of the restoration plan and other necessary permits, the person or property owner, or both, shall restore the critical area in accordance with the approved plan at his/her expense pursuant to a schedule approved by the Permit Authority.~~

~~5. Restoration Plan Requirements.~~

~~a. The Permit Authority shall specify plan submittal requirements, including the type, level of detail and number of copies for an enhancement or restoration plan to be deemed complete and acceptable. See IMC 16.26.060(C).~~

~~b. The Permit Authority may waive plan submittal requirements determined to be unnecessary, or may require additional material necessary to fully review the proposed restoration or enhancement.~~

~~F-7. Maintenance. It shall be the responsibility of the permittee to maintain all erosion control, stormwater facilities, source control BMPs, and stormwater drainage treatment and flow control BMPs devices in good operating condition during the lifetime of the permit in accordance with the Stormwater Design Manual. The permittee shall clean and repair or replace all erosion control facilities or devices, stormwater facilities, source control BMPs, and stormwater treatment and flow control BMPs as often as necessary and as directed by the Permit Authority Director to maintain their effectiveness and level of performance as provided in IMC 13.28.090. In addition, the permittee shall be responsible for assuring that any such facilities damaged during floods, storms, or other adverse weather conditions are returned to normal operating condition within 24 hours of receipt of notice from the storm and surface water utility.~~

~~a. Prior to issuance of any land disturbing permit, clearing, filling, and grading permit, building permit, or other approval permit that triggers application of this chapter, the Director shall require the applicant shall record a declaration of covenants and grant of easement as specified in the Stormwater Design Manual. The restrictions set forth in such covenant shall include, but not be limited to, provisions for notice to the persons holding Title to the property that maintenance and/or repairs are necessary to the facility and a reasonable time limit in which such work is to be completed.~~

~~b. Drainage easements shall be provided in a proposed development for all stormwater conveyance systems that are not located in public rights-of-way or tracts prior to Certificate of~~

Occupancy. The drainage easements shall be granted to the parties responsible for providing ongoing maintenance of the systems, and the city for inspections and monitoring.

c. Signage shall be required to identify stormwater treatment and flow control BMPs and onsite stormwater management facilities such as permeable pavement, bioretention, or rain gardens, as a designed and maintained stormwater facility. Such signs shall identify the owner of the facility responsible for maintenance, -and shall be approved by the City Director.

~~G. General.~~

~~1. Phased construction may be approved by the Permit Authority only if each phase of the project includes construction of the necessary drainage and erosion control facilities and if a phasing plan is approved by the Permit Authority.~~

~~2. Activities governed by this chapter shall not be commenced or continued during unfavorable weather conditions as determined by the Permit Authority unless authorized in writing by the Permit Authority based on a demonstration of an emergency situation.~~

~~3. No work shall occur under a clearing and grading permit within a critical area, critical area buffer or setback area that is adjacent to a critical area between October 1st and April 1st, unless otherwise authorized in writing by the Permit Authority.~~

~~4. All work permitted under this chapter shall proceed continuously to completion in an expeditious manner unless authorized by the Permit Authority because of weather conditions or because of the need to coordinate other construction on that site. If work is interrupted or abandoned, proper steps shall be taken to safeguard the site as approved or required by the Permit Authority.~~

~~H.8. Property Posting. The applicant may be required to shall -1- Post a "Notification of Construction" sign on the project site at least 14 calendar days prior to the commencement of construction activity. The responsibility for posting the sign rests with the project applicant. The sign shall be designed as follows: for development provided however that minor construction as defined in IMC 18.110.110 is exempt from this requirement. The sign shall be designed in accordance with IMC 18.04.180(C)(4).~~

~~a. Size. 4 by 4 feet, constructed of wood;~~

~~b. Color. White background, black lettering;~~

~~c. Lettering Style. Helvetica or similar style; signs shall be prepared using templates or attachable letters. Hand-lettered signs are not acceptable;~~

d. ~~Content of Sign/Notice. The title shall be in 3-inch capital letters, and the remaining sign contents shall be in 1.5-inch upper and lower case (see Permit Center for diagram).~~

i. ~~The title "NOTICE OF LAND USE/CONSTRUCTION ACTION";~~

ii. ~~"City of Issaquah";~~

iii. ~~"Project Description" (for example "Master Site Plan" or "Site Development Permit");~~

iv. ~~"Project Location";~~

v. ~~An 8.5 x 11-inch space in the lower right-hand corner for the posting of other information;~~

vi. ~~The name, address and telephone number of the general contractor;~~

vii. ~~The name, address and telephone number of the Public Works Development Services Department;~~

viii. ~~Other information as the Public Works Director may determine to be necessary to adequately notify the public of the pending land use application;~~

e. ~~Location. The sign shall be installed:~~

i. ~~Midpoint on the street frontage from which the site is addressed or as otherwise directed by the Public Works Director;~~

ii. ~~At either a location 10 feet back from the property line or signs which are structurally attached to an existing building shall be exempt from the setback provision; provided, that no sign is located more than 10 feet back from the property line without approval from the Public Works Director; and~~

iii. ~~The sign must be easily read from the surrounding vicinity and must not be visually obstructed in any way, including, but not limited to, obstruction by vegetation or any other obstruction;~~

f. ~~Installation. The sign must be secured to a 4-inch by 4-inch wood post, long enough to set the post 36 inches below grade and back fill with dirt. (See Permit Center for diagram);~~

g. ~~Certification of Installation. The project applicant must notify the Permit Center that the sign has been posted to proper specifications by submitting a signed "Notification of Signage Installation" to the Permit Center (obtain such forms at the Permit Center).~~

16.26.060 Application – Review.

A. The applicant shall file a written application on the form furnished for the purpose which shall include:

1. The name and address of the applicant, contractor and project engineer;
2. Address of the legal property owner if other than the applicant;
3. A legal description of the property to which the application applies;
4. A description of work covered by the permit;
5. The use of occupancy for which the proposed work is intended;
6. An estimate of the quantities of work to be done to include: area under application; area to be cleared; amount of fill; amount of excavation; impervious area; slope of site;
7. A description of any potential hazards, including but not limited to slides, erosion, siltation, flooding;
8. A description of past land use activities at the site, including environmental assessments (Phase 1 and Phase 2) prepared for the site;
9. A statement that the project and all ground disturbance is confined to the permitting property;
10. A statement declaring whether the property is in the 100-year floodplain and whether it is within 200 feet of any stream, surface water, drainage course or wetland;
11. The signature of the permittee or his agent who may be required to show proof of authority; and
12. Completed environmental checklist in compliance with the State Environmental Policy Act (SEPA).

B. Plans and Specifications. Each application shall be accompanied by 5 sets of plans and specifications including calculations. The plans and specifications shall be prepared by a registered professional engineer and have his/her stamp affixed. The plans and specifications shall include:

1. Map scale, information on plans and specifications. Plans shall be drawn on 24-by-36-inch sheets with a scale of 1 inch representing 20 horizontal feet and 1 inch representing 5 vertical feet.

~~2. Vicinity Map. General vicinity of the proposed site showing adjacent land uses on a 1 inch representing 500 foot scale map.~~

~~3. Property and Contour Lines. Property limits and accurate contours of not greater than 5-foot intervals of existing ground and details of terrain and area drainage. Contour intervals shall extend a minimum of 100 feet off-site.~~

~~4. Finish Contours. Limiting dimensions, elevations and finished contours of not greater than 5-foot intervals to be achieved by the grading and proposed drainage channels and related construction.~~

~~5. Existing Natural Drainage Systems. Existing natural drainage systems including both perennial and intermittent streams and the bordering vegetation.~~

~~6. Drainage Control. Detailed plans and technical information report (TIR) showing how drainage is addressed in accordance with Chapter 13.28 IMC.~~

~~7. Temporary Erosion and Sediment Control (TESC). Detailed TESC plans and associated documents prepared in accordance with Chapter 16.30 IMC, Erosion and Sediment Control. Chapter 16.30 IMC references the design standards in Chapter 13.28 IMC, Stormwater Management Policy, and the Surface Water Design Manual.~~

~~8. Proposed building plans, grading contours (existing and proposed), all utilities (including but not limited to water, sanitary sewer, stormwater, power, gas, telephone, cable, etc.), the area to be graded or cleared and the tree preservation plan developed in accordance with Chapter 18.12 IMC must be shown on one sheet. Where applicable and necessary these items may also be required to be shown on individual plan sheets too. Trees to be removed or altered in any way must be marked in the field, matched on the tree plan and tree replacement plan submitted to the Permit Authority, and approved for removal or alteration by the Permit Authority.~~

~~9. Location of Structures. Location of any buildings or structures on the property where the work is to be performed and the location of any buildings or structures on land of adjacent owners which are within 100 feet of the property or which may be affected by the proposed grading operation.~~

~~10. Rehabilitation Plan. A plan shall be submitted setting forth the proposed rehabilitation of the tract to the approved new use. A rehabilitation contour plan shall be included indicating the general grades and slopes to which excavated areas are to be graded. A description of the methods and materials proposed for restoration of topsoil shall be provided. The rehabilitation plan shall also include a schedule indicating how and when restoration will occur before, during, and after excavation operations. Rehabilitation shall be planned in stages~~

~~compatible with continuing operations. The rehabilitation schedule shall include specific information relating to regrading, drainage, landscaping, erosion and sediment control, backfilling, removal of machinery and buildings, and closing of access roads. Also, the proposed use or uses shall be included.~~

~~11. Setbacks. Setbacks and those areas that are not to be disturbed.~~

~~12. Landscaping and Screening. Landscape and screening plans prepared and approved in accordance with Chapter 18.12 IMC.~~

~~13. Work Methods. Measures to be implemented to minimize dust, mud, noise and other noxious characteristics.~~

The purpose of a permit application is to provide a method to monitor and organize proposals for development review, to provide complete information to project reviewers and decision-makers, and to ensure that a predictable review process will occur within a reasonable or specified time frame. All permit applications for land disturbing and stormwater management actions shall be filed with the Permit Center. The Permit Center will coordinate the review of each application with all appropriate City departments, boards and commissions and external agencies with regulatory authority over the proposal.

A. Submittal requirements for permits that authorize clearing, grading, and stormwater facilities can be obtained from the Permit Center, the City's website, or via the City's online permit submittal portal. Permit applications shall provide required information including the type of submittals, the required level of detail, and the minimum qualifications of preparers of technical documents including the following:

1. A Stormwater Technical Report and LID Feasibility Assessment shall be submitted with the pre-application meeting submittal, or if no such meeting is required, than such report shall be submitted prior to or with land use permit submittal (for example Site Development Permit, Preliminary Plat, Short Plat).
2. Submittal requirements as determined by the Director; and,
3. A tree plan and soil analysis and proposed use of existing soil as required by Chapter 18.12 IMC; and,
4. If located in a designated Area of Special Flood Hazard, as determined by a Flood Insurance Rate Map, a Flood Hazard Permit application as required by Chapter 16.36 IMC.

B. Complete Application: Within 28 days of receipt of such application and plans, the Director shall make a complete application determination in accordance with IMC 18.04.150, Complete application – Sufficiency review.

C. Additional Information. The ~~Permit Authority~~Director may require the applicant to submit additional information if the submitted plans, specifications and associated information are not clear enough to allow for an adequate determination, or when special conditions are found to exist which require specific explanation. Additional information may include, but not be limited to, a soils/geology report including a detailed description of the proposal, and including cuts and fills necessary to construct the proposal, data regarding the nature, distribution, and strength of existing soils, description of the geologic conditions on the site and current geologic processes at work on the site, drainage (surface and subsurface), conclusions and recommendations for grading procedures (temporary and permanent slopes), erosion control, design criteria for retaining walls and/or rockeries as appropriate, fill placement recommendations, and opinions and recommendations covering adequacy of sites to be developed by the proposed grading.

~~D. Rivers and Streams Board Review. The Rivers and Streams Board shall review and make recommendations to the Director on grading activities within their scope and duties as described in IMC 18.03.430.~~

16.26.080 Adjustments and Variances.

~~A. Duties and Responsibilities. Except as provided for elsewhere in this chapter, variances from this code may only be granted by the Permit Authority. The decision to grant, deny or modify the proposed variances shall be based upon evidence that the request meets the following criteria:~~

- ~~1. The variance is necessary to overcome a particular hardship caused by special circumstances relating to size, shape, topography or location of the subject property;~~
- ~~2. The variance is in harmony with the intents and purposes of this chapter and other relevant City ordinances;~~
- ~~3. The variance shall not constitute a grant of special privilege inconsistent with limitations placed upon other properties;~~
- ~~4. Granting the variance will not result in harm or damage to other properties, waterways, or drainage facilities, and the variance will not be otherwise materially detrimental to public welfare;~~
- ~~5. Alternative development concepts in compliance with the existing code have been evaluated and undue hardship would result if such strict adherence to code provisions is required;~~
- ~~6. The variance granted is the minimum amount necessary to comply with the approval criteria listed above and the minimum necessary to accommodate the permitted uses proposed by the application; in addition, the scale of the use shall be reduced as necessary to meet this requirement; and~~
- ~~7. The basis for the variance request is not the result of deliberate actions of the applicant or property owner.~~

B. Variances related to drainage facilities are termed adjustments and shall follow the process identified in Chapter 13.28 IMC, Stormwater Management Policy.

A. Adjustments (Minor changes) to the requirements of this section except the Minimum Requirements, may be granted by the Director through a Level 0 process in accordance with IMC 18.04.290, provided that a written finding of fact is prepared, showing compliance with the following criteria:

1. The adjustment provides substantially equivalent environmental protection; and
2. Based on sound Engineering practices, the objectives of safety, function, environmental protection and facility maintenance, are met.

B. Variances (Major and substantial changes) to the Minimum Requirements may be granted by the City following legal public notice of an application for an exception or variance, legal public notice of the City's decision on the application, and written findings of fact that documents the City determination to grant an exception. Request for Variance is a Level 4 Review Process as provided in the IMC 18.04.460.

C. The City may grant an exception to the minimum requirements if such application imposes a severe and unexpected economic hardship. To determine whether the application imposes a severe and unexpected economic hardship on the project applicant, the Permittee must consider and document with written findings of fact the following:

1. The current (pre-project) use of the site; and
2. How the application of the minimum requirement(s) restricts the proposed use of the site compared to the restrictions that existed prior to the adoption of the minimum requirements; and
3. The possible remaining uses of the site if the exception were not granted; and
4. The uses of the site that would have been allowed prior to the adoption of the minimum requirements; and
5. A comparison of the estimated amount and percentage of value loss as a result of the minimum requirements versus the estimated amount and percentage of value loss as a result of requirements that existed prior to adoption of the minimum requirements; and
6. The feasibility for the owner to alter the project to apply the minimum requirements.
7. In addition any exception must meet the following criteria:
 8. The exception will not increase risk to the public health and welfare, nor be injurious to other properties in the vicinity and/or downstream, and to the quality of waters of the state; and

9. The exception is the least possible exception that could be granted to comply with the intent of the Minimum Requirements.

~~C-D.~~ Conditions may be imposed upon the granting of any Adjustment or V~~ariance~~. Unless otherwise specified, the granting of an Adjustment or V~~ariance~~ shall be subject to all plans, specifications and conditions set forth in the application.

16.26.090 Appeals.

Any person aggrieved by any decision of the ~~Permit Authority~~Director to issue, fail to issue, suspend or revoke a permit required under this chapter may appeal such decision to the Hearing Examiner in accordance with the provisions of IMC 18.04.250 to 18.04.260 regarding appeals. Any determination by the City shall remain in effect until the appeal is finalized.

16.26.100 Permit fees.

A fee for each ~~Public Works~~ Permit for clearing, ~~and grading, and stormwater management~~ shall be paid to the City as set forth in the fee schedule adopted pursuant to Chapter 3.65 IMC. The fee for a clearing and grading permit authorizing additional work to that of a valid permit shall be the difference between the fee paid for the original permit and the fee specified for the entire project on the fee schedule.

~~16.26.110 Expiration of permits and applications.~~

~~The expiration of Public Works applications and Permits for clearing and grading and applications shall follow the same specifications as for building permits and requirements now or hereinafter amended except that the Permit Authority shall be the official; provided, however, that the Permit Authority may set specific limits upon the permit for project initiation or completion because of environmental reasons or because of coordination with other permitted site work when he/she finds it is advisable to do so.~~

16.26.120 Security.

A. Performance Security. For all applications for a ~~Public Works~~ Permits allowing clearing, ~~and grading, and stormwater management,~~ the ~~Permit Authority~~Director shall require the applicant to establish a security of the type specified in accordance with IMC 18.04.230 to be posted prior to issuance of the permit to guarantee the completion of the work in accordance with the approved plans, specifications, and permit conditions. The amount of said security shall be equal to 150 percent of the estimated cost of construction of all items of work outside of any habitable structures which contribute to soil or geologic structure stability, control of drainage, habitat restoration or permanent erosion control, and shall include, but not be limited to, site clearing and grubbing, excavation, fill, import of structural fill, export and disposal of unsuitable materials, retaining walls, rockeries, surface and subsurface drainage systems, stormwater facilities, curbs, gutters, paving, restoration of vegetation, surface treatment of slopes, habitat restoration and enhancement plantings, and other items as may be required by the ~~Permit Authority~~Director.

The performance guarantee security shall be maintained in full until the work has been completed and all possibility of erosion has passed. Should the permittee fail to complete the work in accordance with the approved plans, specifications and permit conditions, the City may enter the property and cause the work to be completed and shall be reimbursed for all expenses so incurred from the proceeds of the security.

B. The Director shall require the applicant to post adequate cash security to assure compliance with the terms of the approved permit for sediment and erosion control, including an amount necessary to cover failure to maintain the erosion and sediment control facilities and the associated costs by the City to repair and mitigate impacts created by such failure. The amount of security to be posted upon permit application shall be found in IMC 3.65.040 and as follows:

1. Any project involving highly erodible soils; project features or construction methods that could create higher levels of erosion and sedimentation; or downstream receiving waters or sensitive areas that would require a large effort to mitigate the impacts created by a failure of an erosion and sediment control facility: \$5,000 or as appropriate as determined by the Public Works Director.

2. The Director may waive the security deposit for projects of short duration with negligible potential impacts or for other special circumstances. This does not exempt the applicant from complying with the requirements of this chapter.

16.26.130 Indemnification.

The permittee shall indemnify and hold the City and its agents, employees, and/or officers, harmless from and shall process and defend at its own expense any and all claims, demands, suits, at law or equity, actions, penalties, loss, damages, or costs, of whatsoever kind or nature, brought against the City arising out of, or in connection with, or incident to, the execution of this agreement and/or the permittee's performance or failure to perform any aspect of this agreement; provided, however, that if such claims are caused by or result from the concurrent negligence of the City, its agents, employees, and/or officers, this indemnity provision shall be valid and enforceable only to the extent of the negligence of the permittee; and provided further, that nothing herein shall require the permittee to hold harmless or defend the City, its agents, employees, and/or officers for damages or loss caused by the City's sole negligence. The permittee expressly agrees that the indemnification provided herein constitutes the contractor's waiver of immunity under RCW Title 51, for the purposes of this agreement. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this agreement. No liability shall attach to the City by reason of entering into this agreement except as expressly provided herein.

16.26.135 Insurance.

The permittee shall procure and maintain for the duration of the agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the permittee, their agents, representatives, employees or subcontractors. Permittee's

maintenance of insurance as required by the agreement shall not be construed to limit the liability of the permittee to the coverage provided by insurance, or otherwise limit the City's recourse to any remedy available at law or in equity. Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII. The permittee shall provide a certificate of insurance evidencing:

Commercial general liability insurance written on ISO occurrence basis form CG 00 01 with limits no less than \$1,000,000 combined single limit per occurrence and \$2,000,000 aggregate for personal injury, bodily injury and property damage. Coverage shall include but not be limited to liability arising from: premises, operations, personal injury and advertising injury, and liability assumed under an insured contract. The insurance shall be endorsed to provide the Aggregate Per Project Endorsement ISO Form CG 25 03 11 85. There shall be no endorsement or modification of the commercial general liability insurance for liability arising from explosion, collapse or underground property damage.

The City, its officers, volunteers, and agents shall be named as an additional insured on the insurance policy, as respects work performed by or on behalf of the permittee and a copy of the endorsement naming the City as additional insured shall be attached to the certificate of insurance, using ISO Additional Insured Endorsement CG 20 10 10 01 and Additional Insured – Completed Operations Endorsement CG 20 37 10 01 or substitute endorsements providing equivalent coverage for completed operations. A copy of the certificate and endorsement shall be provided to the City prior to commencement of the work. The City reserves the right to request certified copies of any required insurance policies. Any payment of deductible or self-insured retention shall be the sole responsibility of the permittee.

The permittee's insurance shall contain a clause stating that coverage shall apply separately to each insured against whom claim is made or suit is brought, except with respects to the limits of the insurer's liability. The permittee's insurance shall be primary insurance with respect to the City and the City shall be given 30 days' prior written notice of any cancellation, suspension or material change in coverage.

16.26.140 Notification of completion.

For all applications for a ~~Public Works~~ Permit allowing clearing, ~~and grading, and stormwater management,~~ the permittee or his agent shall notify the ~~Permit Authority~~Director or his/her designee when the clearing, ~~and grading, and stormwater facility~~ operation at each stage is ready for final inspection. Final approval shall not be given until all work has been completed in accordance with the final approved project plan and all permit conditions have been met and the required final reports (including hardcopy and scanned as-built record drawings ~~mylar and AutoCad~~AutoCAD drawing) have been submitted.

16.26.150 Stop work orders/permit revocation.

A. Permit Suspension/Revocation. The ~~Permit Authority~~Director shall suspend work or revoke a permit, as appropriate, if the ~~Permit Authority~~Director finds that:

1. The work is not authorized by a valid permit; or

2. Inaccurate information was used to obtain the permit; or
3. The permittee is not complying with the terms or conditions of the permit or approved plans; or
4. The work is, in the ~~Permit Authority's~~ Director's judgment, adversely affecting the public health, safety, or welfare; or is a hazard to property; or is adversely affecting, or could adversely affect, adjacent property including a right-of-way, a drainage way, a watercourse, an environmentally critical area, ~~or a stormwater facility~~ or a stormwater treatment and flow control BMP; or
5. Adverse weather is causing significant problems on or off site; or
6. The required project surety has been expended to the point that it no longer provides assurance of completion of the project in compliance with the terms of the permit; or
7. Contamination of site soils from hazardous materials are encountered during the course of site work that were previously unknown, and pose a potential risk to human health or the environment, and such discovery of contamination requires notification to the Department of Ecology or other appropriate agency in accordance with State or Federal regulations. Suspension of work will continue until the Director is properly notified or is provided with other information that State and Federal regulations are being complied with and continuation of site work is appropriate.
8. Not installing TESC facilities in accordance with the approved TESC plans prior to initiation of construction activities; or
9. Not maintaining TESC facilities in accordance with the approved TESC plans; or
10. Turbidity in stormwater leaving the site exceeds 100 NTU in a rainfall event less than the 10-year/24-hour event (3.5 inches), as measured at the City's rain gauge; or
11. Not submitting within 30 days of written notification by the City for an updated TESC plan to the City if the approved TESC plan is found to be ineffective or construction sequencing or other changed site conditions make it necessary to modify the original TESC plan to make it compliant with the requirements of the Stormwater Design Manual; or
12. Not having a certified erosion and control lead (CESCL) available at the site to direct implementation of the TESC plan, if an on-site CESCL is required by the Site Work Permit.

B. Stop Work Order. The ~~Permit Authority~~ Director shall issue the permittee a written stop work order specifying the nature of the violation or problem which must be remedied prior to resuming other work on the project. If the permittee does not comply with the order within the time specified, the ~~Permit Authority~~ Director, as an alternative to other remedies, may enter the project site and perform the required work. All costs incurred by the City in performing such work shall be drawn against the surety posted by the permittee. In the absence of

sufficient surety, the City may place a lien against the property in the amount of the funds expended to perform the required work. Removal of a stop work order by anyone other than authorized City personnel is a civil violation.

C. Restoration. Violators of this chapter, or of a permit issued hereunder, shall be responsible for restoring unlawfully damaged areas in conformance with the applicable Issaquah Municipal Codes, approved by the ~~Permit Authority~~Director, which provides for repair of any environmental and property damage, and restoration of the site; and which results in a site condition that, to the greatest extent practical, equals the site condition that would have existed in the absence of the violation(s).

1. Any person who alters a protected area including an environmentally critical area as defined in Chapter 18.10 IMC, native growth protection easement, protected trees, greenbelt, open areas, or areas of native vegetation within the development site that are not part of the development proposal without a permit, in violation of a permit, or in any way not permitted, and any property owner upon whose property such an area has been so altered, shall submit a plan for restoration to the Director. Upon approval of the restoration plan and other necessary permits, the person or property owner, or both, shall restore the critical area in accordance with the approved plan at his/her expense pursuant to a schedule approved by the Director.

2. Restoration Plan Requirements.

a. The Director shall specify plan submittal requirements, including the type, level of detail and number of copies for an enhancement or restoration plan to be deemed complete and acceptable. See IMC 16.26.060(C).

b. The Director may waive plan submittal requirements determined to be unnecessary, or may require additional material necessary to fully review the proposed restoration or enhancement.

D. Prohibition of Further Approvals. The City shall not accept, process, or approve any application for a subdivision or any other development permit or approval, or issue a certificate of occupancy for property on which a violation of this chapter has occurred until the violation is cured by restoration or other means acceptable to the ~~Permit Authority~~Director and by payment of any penalty imposed for the violation.

16.26.160 Obligation of person performing work.

Every contractor or other person performing or directing the performance of any work requiring a permit under this chapter shall have in his/her possession prior to commencement of and during all phases of the work, an original or copy of a valid permit (including conditions) and shall further have a duty to be familiar with and comply with the terms and conditions of the permit and approved plans and specifications.

16.26.170 Project inspection.

A. General. All projects which include clearing or grading shall be subject to inspection by the ~~Permit Authority~~Director or his/her designee. The ~~Permit Authority~~Director or his/her designee shall be granted unlimited right of entry to the work site by the applicant for the purposes of making inspections to determine that the requirements of the plans and permits are being complied with and for the purposes of taking corrective measures of an emergency nature. The cost of such corrective measures shall be borne by the applicant. The ~~Permit Authority~~Director may require inspection and testing by an approved testing agency at any stage of the application or project. Said inspection and testing shall meet or exceed the minimum schedules as listed in the ~~street standards~~, City standards or as conditioned on the permit or published by the Permit Authority.

B. Notice. It shall be the permittee's responsibility to notify the ~~Permit Authority~~Director and his/her designee, if applicable, at least 24 hours prior to the time required for inspection. All inspections and testing required shall be determined prior to issuance of the application when requesting a permit. The ~~Permit Authority~~Director may require additional inspection or testing if conditions are found to be different than those presented in the plans or supporting documents; however, if conditions change, it shall be the responsibility of the applicant or the professional consultant(s) who submitted the plans or documents to provide the ~~Permit Authority~~Director with recommended changes in procedures, for its review and approval.

C. Suspension of Permits. Whenever the ~~Permit Authority~~Director determines that the act or intended act of clearing, grading, excavation or fill has become or will constitute a hazard to life and limb, or endangers property, or adversely affects the safety, use or stability of a public way, drainage channel, stream or surface water, including siltation and sedimentation therein, the ~~Permit Authority~~Director shall immediately suspend the clearing and grading permit.

The permittee or other person or agent in control of the property, upon receipt of notice in writing from the ~~Permit Authority~~Director shall, within the period specified therein, terminate such clearing, grading, excavation, embankment or fill, or eliminate the same from the development plans, or modify the plans, as may be required so as to eliminate the hazard and be in conformance with the requirements of this code. The permittee shall also be required to take measures to correct damages caused to adjacent or downstream or upstream properties, under the direction of the ~~Permit Authority~~Director, or if not accomplished in a reasonable period of time, the City shall do so using the security provided as part of the clearing and grading permit under which the work was done.

16.26.180 Notice to proceed authorized.

After a permittee is granted a ~~Public Works Permit~~ for clearing, ~~and grading, and stormwater management~~, no work shall commence prior to issuance of a written "notice to proceed" by the ~~Permit Authority~~Director. Issuance of the notice to proceed shall occur only after expiration of any appeal period, after a preconstruction conference has been held, and after completion of all conditions set forth in the clearing and grading permit required to be completed prior to commencement of work.

16.26.185 Conversion of property from forestry practices – Six (6) year moratorium on nonforestry development.

A. Pursuant to RCW 76.09.060(3)(B)(i)(d), a 6-year moratorium shall apply to all nonforestry development approvals and permits including, but not limited to, building permits and subdivision approvals related to property regulated by a forest practices permit under Chapter 76.09 RCW.

B. Subsection A of this section shall not apply to property when the forest landowner stated their intent to convert the property at the time of forest practices application (RCW 76.09.060), or if the property is cleared in accordance with the standards set forth in this chapter.

C. The application for this section is subject to Level 0 Review as set forth in IMC 18.04.320.

16.26.190 Enforcement.

The violation or failure to comply with any of the provisions of this chapter is unlawful. The remedies provided in this section, whether civil or criminal, shall be cumulative and shall be in addition to any other remedy provided by law.

A. Civil Remedies. Any work or other activities which are within the authority of this chapter performed without a permit or in violation of any lawful order or requirement of the ~~Public Works~~ Director is deemed to be a public nuisance and may be abated in a manner prescribed by the ~~Permit Authority~~ Director. Injunction proceedings or other appropriate action may be initiated in a court of competent jurisdiction against any person who violates or fails to comply with the provisions of this chapter in order to prevent, enjoin, abate or terminate violations of this chapter or to restore the property to its original conditions, as nearly as practicable.

B. Persons Subject to Penalty. Any person who violates or fails to comply with the requirements of this chapter or who fails to conform to the terms of an approval or order issued by the Director shall be subject to the civil and criminal penalties provided in Chapter 1.36 IMC, Code Enforcement. Each day of continued violation shall be considered a separate violation for purposes of penalty.

C. In addition, any person convicted of a violation(s) of this chapter shall be required to abate any conditions on the subject property in a manner which will achieve full compliance with this chapter and restore any property to its original condition, as nearly as practicable.

Exhibit A4: IMC 16.30 Erosion and Sediment Control

Chapter 16.30

EROSION AND SEDIMENT CONTROL

Sections:

- 16.30.010 Recodified. ~~Purpose.~~
- 16.30.020 Recodified. ~~Permit required.~~
- 16.30.030 Recodified.
- 16.30.040 Recodified. ~~Application forms.~~
- 16.30.050 Recodified. ~~Review.~~
- 16.30.060 Recodified. ~~Security.~~
- 16.30.070 Recodified. ~~Appeals.~~
- 16.30.080 Recodified. ~~Project inspection.~~
- 16.30.090 Recodified. ~~Liability.~~
- 16.30.100 Recodified. ~~Exemptions.~~
- 16.30.110 Recodified. ~~Stop work orders/permit revocation.~~
- 16.30.120 Recodified. ~~Enforcement.~~
- 16.30.130 Recodified. ~~Obligation of person performing work.~~

16.30.010 Purpose.

Recodified to IMC 16.26.

~~The City Council finds and determines that the public health, safety and general welfare require the regulations hereinafter imposed in connection with certain land alteration and use activities, to control, limit and manage erosion and sedimentation, to protect and maintain the hydrologic balance of watersheds and watercourses, preserve wildlife and aquatic habitat and to protect the life and property of individuals in and adjacent to the City.~~

16.30.020 Permit required.

Recodified to IMC 16.26.

~~It is unlawful to grub, clear, grade, fill, excavate, quarry, mine and/or stockpile soil on any property within the City of Issaquah or improve or develop any such property without a Public Works Permit issued for erosion and sedimentation control.~~

16.30.030 Application fees.

Recodified to IMC 3.65.040(G) by Ord. 2259.

16.30.040 Application forms.

Recodified to IMC 16.26.

~~A. Application for a Public Works Permit for erosion and sedimentation control shall include the following:~~

- ~~1. The name and address of the applicant;~~
- ~~2. A legal description of the property to which the application relates;~~
- ~~3. The name and address of the owner or owners of said property;~~
- ~~4. The name of the certified erosion and sediment control lead (CESCL) assigned to the site, if applicable;~~
- ~~5. A general description of the land alteration, construction or other activity contemplated;~~
- ~~6. A proposed temporary erosion and sediment control (TESC) plan and associated required documentation that complies with Chapter 13.28 IMC and the Surface Water Design Manual;~~
- ~~7. Such other information as the Public Works Director may require; and~~
- ~~8. Consent by or on behalf of the owner or owners of the property for the Public Works Director or his authorized agent to enter the property during the period of installation of erosion and sedimentation facilities, for purposes of inspection.~~

~~B. For multiple-parcel projects involving up to 4 contiguous single-family or duplex lots, a single Public Works Permit for erosion and sediment control can be issued if the properties are under the same ownership and the temporary erosion and sediment control facilities are constructed and maintained by the same contractor to serve all parcels. A single permit covering more than 4 lots may be granted by the Director on a case-by-case basis if this will result in more effective erosion and sediment control.~~

16.30.050 Review.

Recodified to IMC 16.26.

The Director of Public Works shall review the applications and plans submitted in accordance with IMC 16.30.040. The plan shall provide for the following:

A. Temporary Erosion and Sedimentation Control.

1. A temporary erosion and sedimentation control (TESC) plan and associated required documentation is required for all construction involving a land disturbing activity, requiring a Public Works Permit (Chapter 16.26 IMC), or requiring a Building Permit (Chapter 16.04 IMC). The TESC plan shall be prepared in accordance with Chapter 13.28 IMC and the adopted Surface Water Design Manual. The plan shall clearly indicate the construction sequence for establishment of all erosion control work, both temporary and permanent for the drier season and wetter winter months. The TESC plan shall provide a monitoring discharge point for each plan to allow turbidity monitoring of water being discharged from the site. For projects other than small sites, as defined in the Surface Water Design Manual, the plan shall be designed by, and carry the seal of, a civil engineer having certified erosion and sediment control lead (CESCL) certification. The erosion control plan shall be based on the best management practices and other requirements identified in the Surface Water Design Manual (Chapter 13.28 IMC).

2. Erosion and sedimentation control devices shall be installed prior to initiation of construction activities and maintained by the permittee over the entire duration of the project until all possibility for erosion has passed and permanent vegetation has been established, as determined by the Permit Authority.

3. The TESC plan shall be designed to prevent, to the maximum extent practicable, the transport of sediment from the site to drainage facilities, surface waters, and adjacent properties. Turbidity in construction runoff at any monitoring point that exceeds 100 NTUs at any time up to the 10-year/24-hour storm event, as measured at the City's rain gage, is considered a violation of the Public Works Permit, subject to stop work and enforcement as described in IMC 16.30.110.

4. Updates to the TESC plan can be required at any time during the term of the permit if the approved TESC plan is found to be ineffective or construction sequencing or other changed site conditions makes it necessary to modify the original TESC plan to make it compliant with the requirements of the Surface Water Design Manual (Chapter 13.28 IMC).

B. Permanent Erosion Control and Vegetation Restoration.

1. Permanent erosion control shall be considered and set forth in the original design of the project to provide erosion control following completion of construction.

2. Erosion control shall include, but not be limited to, permanently installed landscaping, terracing or other grading design methods, drainage facilities such as ponds or catch basins, and retention or reestablishment of native vegetation.

~~3. Vegetation shall be restored as specified by the Permit Authority on those areas of the site disturbed by the land alteration activity which are not covered by permanent impervious surface improvement (e.g., buildings, parking lots, etc.) within 7 days of the completion of grading or clearing, unless seasonal or weather conditions are unfavorable. In this case, temporary erosion control measures shall be installed and maintained until restoration can be completed. The soils shall be stabilized in the area of vegetation restoration prior to that restoration to the satisfaction of the Permit Authority and in compliance with other applicable soil restoration and landscaping requirements for the project.~~

16.30.060 Security.

Recodified to IMC 16.26.

~~The Director shall require the applicant to post adequate cash security to assure compliance with the terms of the approved permit for sediment and erosion control, including an amount necessary to cover failure to maintain the erosion and sediment control facilities and the associated costs by the City to repair and mitigate impacts created by such failure. The amount of security to be posted upon permit application is as follows:~~

~~A. All new construction of residential plats or short plats, commercial, or industrial development; or any project involving grading of greater than 1.0 acre: \$5,000.~~

~~B. Single family residential or duplex projects, or clearing and grading projects without residential or commercial development of less than 1.0 acre: \$2,000.~~

~~C. Remodels or additions, or small projects involving clearing and grading of less than 5,000 square feet: \$750.00.~~

~~D. Any project involving highly erodible soils; project features or construction methods that could create higher levels of erosion and sedimentation; or downstream receiving waters or sensitive areas that would require a large effort to mitigate the impacts created by a failure of an erosion and sediment control facility: \$5,000 or as appropriate as determined by the Public Works Director.~~

~~E. The Director may waive the security deposit for projects of short duration with negligible potential impacts or for other special circumstances. This does not exempt the applicant from complying with the requirements of this chapter.~~

16.30.070 Appeals.

Recodified to IMC 16.26.

~~The decision of the Public Works Director on any application for an erosion and sedimentation control permit shall be appealable to the Mayor. The Mayor is authorized to delegate responsibility for hearing and deciding the appeal to the City Administrator. The procedures for filing and hearing such appeal shall be as follows:~~

A. A person must file a written notice of appeal within 14 calendar days of the date of the decision being appealed and pay an appeal fee of \$500.00.

B. The notice of appeal should state clearly the grounds for appeal. The notice of appeal together with the \$500.00 nonrefundable appeal fee shall be submitted to the Permit Center no later than 5:00 p.m. on the fourteenth calendar day following the date of decision.

C. Upon timely receipt of such notice of appeal, and payment of the fee, the City will schedule an appeal hearing within 14 days.

D. Type of appeal: open record.

E. Judicial appeals (appeal of the appeal decision) are appealable to King County Superior Court (Chapter 36.70C RCW).

16.30.080 Project inspection.

Recodified to IMC 16.26.

All projects which include erosion and sediment control shall be subject to inspection by the Permit Authority or his/her designee. The Permit Authority or his/her designee shall be granted unlimited right of entry to the work site by the applicant for the purposes of making inspections to determine that the requirements of the plans and permits are being complied with and for the purposes of taking corrective measures of an emergency nature. The cost of such corrective measures shall be borne by the applicant. The Permit Authority may require inspection at any stage of the application or project. Said inspection shall meet or exceed the minimum schedules as listed in the Surface Water Design Manual, or as conditioned on the permit or published by the Permit Authority.

16.30.090 Liability.

Recodified to IMC 16.26.

The City by this chapter has undertaken to protect the public health and safety and maintain environmental quality by imposing only minimum standards for the control of soil erosion and water sedimentation. By this chapter the City has not assumed the responsibility to any particular individual or entity for protecting persons or property from injury or damage caused by erosion and sedimentation and the City therefore does not by this enactment assume any liability for the actions or inactions of its officers, employees or agents in the application and enforcement of the provisions of this chapter. (Ord. 2560 § 4 (Exh. A3), 2009; Ord. 2480 § 1, 2006; Ord. 1582 § 1, 1983).

16.30.100 Exemptions.

Recodified to IMC 16.26.

The following activities are exempt from compliance with this chapter:

- A. The cutting of nonprotected, protected and significant trees as defined in Chapter 18.12 IMC;
- B. Routine landscape installation and maintenance involving not more than 30 cubic yards of excavation and fill on a single parcel of property within a consecutive 12-month period; provided, that no materials are stockpiled on City streets (unless permitted under Street Use Permit) and reasonable efforts are made to prevent erodible materials from entering drainage facilities or surface waters;
- C. Emergency situations involving immediate danger to life or property, substantial fire hazards or other public safety hazards within 7 days of the onset of the emergency or during the period covered by an emergency declaration by the City; provided verbal authorization is provided by the City and followed up with written authorization communicating the need and verifying the nature of the emergency;
- D. Routine agricultural activities such as plowing, harrowing, disking, ridging, listing, leveling and similar operations to prepare a field or crop;
- E. Fill or excavation in association with mineral resource extraction or processing in a mineral resource zone ("M") regulated by IMC 18.07.525;
- F. Cemetery graves;
- G. Removal of nonnative invasive plant species from environmentally critical lands and native growth protection easements in accordance with IMC 18.10.400;
- H. Small projects with a total duration of 7 days or less that will be performed during dry weather, if the project is fully stabilized at completion, and no prohibited discharges occur per IMC 13.28.025. During the wet season this period can be shorter if weather conditions cannot be accurately predicted. This exemption requires notification to the City to approve start of work and monitor the activity to verify conformance with this exemption;
- I. Projects that have no potential to discharge turbid stormwater runoff or sediment to a public drainage facility or surface water and cause a violation of water quality standards. Factors that would be considered in exempting an activity include but are not limited to: likelihood of drainage leaving the site or entering surface water, soil type and its potential to erode, size and duration of proposed activity, and steepness of slope.

16.30.110 Stop work orders/permit revocation.

Recodified to IMC 16.26.

A. ~~Permit Suspension/Revocation.~~ The Public Works Director shall suspend work or revoke a permit as appropriate, for failing to meet the TESC requirements of Public Works Permit including:

- ~~1. Not installing TESC facilities in accordance with the approved TESC plans prior to initiation of construction activities; or~~
- ~~2. Not maintaining TESC facilities in accordance with the approved TESC plans; or~~
- ~~3. Turbidity in stormwater leaving the site exceeds 100 NTU in a rainfall event less than the 10-year/24-hour event (3.5 inches), as measured at the City's rain gage; or~~
- ~~4. Not submitting within 30 days of written notification by the City for an updated TESC plan to the City if the approved TESC plan is found to be ineffective or construction sequencing or other changed site conditions make it necessary to modify the original TESC plan to make it compliant with the requirements of the Surface Water Design Manual (Chapter 13.28 IMC); or~~
- ~~5. Not having a certified erosion and control lead (CESCL) available at the site to direct implementation of the TESC plan, if an on-site CESCL is required by the Public Works Permit; or~~
- ~~6. The work is, in the Permit Authority's judgment, adversely affecting the public health, safety, or welfare; or is a hazard to property; or is adversely affecting, or could adversely affect, adjacent property including a right-of-way, a drainage way, a watercourse, an environmentally critical area, or a stormwater facility; or~~
- ~~7. The required project security has been expended to the point that it no longer provides assurance of completion of the project in compliance with the terms of the permit; or~~
- ~~8. The applicant is otherwise not complying with the terms or conditions of the permit or approved plans.~~

B. ~~Stop Work Order.~~ The Permit Authority shall issue the permittee a written stop work order specifying the nature of the violation or problem which must be remedied prior to resuming other work on the project. If the permittee does not comply with the order within the time specified, the Permit Authority, as an alternative to other remedies, may enter the project site and perform the required work. All costs incurred by the City in performing such work shall be drawn against the security posted by the permittee. In the absence of sufficient security, the City may place a lien against the property in the amount of the funds expended to perform the required work. Removal of a stop work order by anyone other than authorized City personnel is a civil violation.

~~C. Restoration. Violators of this chapter, or of a permit issued hereunder, shall be responsible for restoring unlawfully damaged areas in conformance with the applicable Issaquah Municipal Codes, approved by the Permit Authority, which provides for repair of any environmental and property damage, and restoration of the site; and which results in a site condition that, to the greatest extent practical, equals the site condition that would have existed in the absence of the violation(s).~~

~~D. Prohibition of Further Approvals. The City shall not accept, process, or approve any application for a subdivision or any other development permit or approval, or issue a certificate of occupancy for property on which a violation of this chapter has occurred until the violation is cured by restoration or other means acceptable to the Permit Authority and by payment of any penalty imposed for the violation.~~

16.30.120 Enforcement.

Recodified to IMC 16.26.

~~The violation or failure to comply with any of the provisions of this chapter is unlawful. The remedies provided in this section, whether civil or criminal, shall be cumulative and shall be in addition to any other remedy provided by law.~~

~~A. Civil Remedies. Any work or other activities which are within the authority of this chapter performed without a permit or in violation of any lawful order or requirement of the Public Works Director is deemed to be a public nuisance and may be abated in a manner prescribed by the Permit Authority. Injunction proceedings or other appropriate action may be initiated in a court of competent jurisdiction against any person who violates or fails to comply with the provisions of this chapter in order to prevent, enjoin, abate or terminate violations of this chapter or to restore the property to its original conditions, as nearly as practicable.~~

~~B. Persons Subject to Penalty. Any person who violates or fails to comply with the requirements of this chapter or who fails to conform to the terms of an approval or order issued by the Director shall be subject to the civil and criminal penalties provided in Chapter 1.36 IMC, Code Enforcement. Each day of continued violation shall be considered a separate violation for purposes of penalty.~~

~~C. In addition, any person who violates or fails to comply with the requirements of this chapter shall be required to abate any conditions on the subject property in a manner which will achieve full compliance with this chapter and/or restore any property to its original condition, as nearly as practicable.~~

16.30.130 Obligation of person performing work.

Recodified to IMC 16.26.

~~Every contractor or other person performing or directing the performance of any work requiring a permit under this chapter shall have in his/her possession, prior to commencement of and during all phases of the work, an~~

original or copy of a valid permit (including conditions) and shall further have a duty to be familiar with and comply with the terms and conditions of the permit and approved plans and specifications.

Exhibit A5: IMC 18 Land Use Code and Central Issaquah Development and Design Standards

Exhibit A5.a – Impervious Surface Definition Clarification

18.02.110 Definitions –I

The definition of "Impervious surface" is amended to read:

"Impervious surface: A hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops and eaves, walkways, patios, decks (covered or open slat construction are both considered impervious), driveways, parking lots or storage areas, concrete or asphalt or other paving, pavers, and/or other hard-surfaced permeable materials, gravel roads, packed earthen materials, rockeries and oiled macadam or other surfaces which similarly impede the natural infiltration of surface and storm water runoff. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for the purposes of this definition."

18.07.050 Impervious surface.

Subsection B, Use of Pervious Areas, is amended to read:

B. Use of Pervious Areas: All required pervious areas on the site (per IMC 18.07.360, District standards table) shall be landscaped as required in this chapter. Parking or pedestrian access areas that use "pervious pavers" or pervious stormwater measures shall not be counted towards the required pervious areas of the land use district; however, stormwater regulations in IMC 13.28.055, ~~Drainage review – Deviations for low impact development proposals, provide incentives for~~ require the use of ~~pervious pavers, paving, and/or other hard-surfaced permeable materials~~ and other low impact development measures as the preferred and commonly used approach if feasible. Required pervious areas shall include the following areas in order of priority:

Central Issaquah Development and Design Standards, Chapter 2.0 Definitions Specific to Central Issaquah

The definition of "Impervious surface" is amended to read:

Impervious surface: A hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development, and/or a hard surface area which causes

water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops and eaves, walkways, patios, decks (covered or open slat construction are both considered impervious), driveways, parking lots or storage areas, concrete or asphalt or other paving, pavers, and/or other hard-surfaced permeable materials, gravel roads, packed earthen materials, rockeries and oiled macadam or other surfaces which similarly impede the natural infiltration of surface and storm water runoff. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for the purposes of this definition.

Exhibit A5.b – Critical Area Definition changes to support LID

18.10.390 Definitions

The definitions of "Regional retention/detention facility", "Regional stormwater management facility", and "Retention/detention facility" are deleted:

~~Regional retention/detention facility: A surface water control structure proposed or defined by the City Public Works Department, to provide surface water control for a specific area, which will be determined by the City Public Works Department on a case-by-case basis.~~

~~Regional stormwater management facility: A surface water control structure installed in or adjacent to a stream or wetland of a basin or sub-basin by the King County Land and Water Resources Division (KCLWR) or a project proponent. Such facilities protect downstream areas identified by KCLWR as having previously existing or predicted significant regional basin flooding or erosion problems.~~

~~Retention/detention facility: A type of drainage facility designed either to hold water for a considerable length of time and then release it by evaporation, plant transpiration and/or infiltration into the ground; or to hold runoff for a short period of time and then release it to the surface and stormwater management system.~~

The definition of "Stormwater facility" is amended to read:

~~Stormwater facility: A human-built system or structure for the conveyance or control of stormwater runoff~~ A constructed component of a stormwater drainage system, designed or constructed to provide detention/retention of stormwater and water quality treatment. Stormwater facilities include, but are not limited to detention ponds, retention ponds, constructed stormwater wetlands, infiltration devices, vaults, biofiltration swales, and on-site stormwater management Best Management Practices (BMPs) such as bioretention, rain gardens, vegetated roofs, and permeable pavements.

Exhibit A5.c – Allowed Wetland Activities changes to support LID

18.10.610 Allowed wetland activities.

Subsection B, Activities Allowed in Wetland Buffers, is amended to read:

B. Activities Allowed in Wetland Buffers: In wetland buffers, regulated activities which have minimal adverse impacts within the buffers and no adverse impacts on wetlands may be allowed through the Land Use Permit process, provided they are conducted using best management practices and restoration. These activities include:

1. Low impact, passive recreation-related activities such as development of pervious recreation trails, nonpermanent wildlife watching blinds, short-term scientific or educational activities; or
2. ~~Stormwater management~~ facilities having no feasible alternative on-site locations, where appropriate restoration is included, and which would not adversely affect the function or values of the buffer or wetland, may be allowed in wetland buffers associated with Category II, III and IV wetlands only. ~~Stormwater management~~ facilities shall not encroach into wetland buffers by more than twenty-five (25) percent of the standard wetland buffer width, per IMC 18.10.640, or use more than twenty-five (25) percent of the total buffer area without a variance. Stormwater vaults located in wetland buffers shall have adequate soil cover to support native vegetation including small trees, shrubs and groundcover. Any wetland buffer area displaced by a stormwater management facility shall be compensated for by adding an equal wetland buffer area in accordance with wetland buffer averaging, IMC 18.10.650(D)(3)(5) so that no net loss of wetland buffer area results from the construction of the facility. ~~or Stormwater facilities such as bioretention, rain gardens, or constructed wetlands planted with appropriate native vegetation and trees are allowed without buffer averaging requirements.~~
3. Flood conveyance compensatory storage, where there is no other feasible alternative, where appropriate restoration is included, and where wetland hydrology or vegetation will not be significantly impacted; or
4. Surface water discharge to a wetland from a ~~detention facility, presettlement pond~~ stormwater facility or other surface water management activity or facility may be allowed if the discharge enhances the wetland and/or does not increase the rate of flow, change the plant composition in a forested wetland, or decrease the water quality of the wetland; or
5. Trails. Construction of public and private trails may not be allowed in wetland buffers unless a critical areas study per IMC 18.10.410 documents no loss of buffer functions and values. Additional buffer width equal to the width of the trail tread and the cleared trail shoulders shall be required, except where existing development prevents adding buffer width. In this case, other mitigating measures shall be required to ensure no loss of buffer functions and values.

Exhibit A5.d – Alterations to streams and buffers changes to support LID

18.10.775 Alterations to streams and buffers.

Subsection E, Surface Water Management, is amended to read:

E. Surface Water Management: The following surface water management actions may be allowed (through the appropriate review and approval process, or Level 1 Review if none is specified) only if they meet the following requirements:

1. Surface water discharges to streams from ~~detention facilities, presettlement ponds, stormwater facilities~~ or other surface water management structures having no feasible alternative on-site locations, may be allowed so long as the discharge complies with the provisions of the City's currently adopted ~~Surface Waters~~Stormwater Design Manual.
2. Flood conveyance compensatory storage, where there is no other feasible alternative, where appropriate restoration is included, and where wetland hydrology will not be significantly affected.
3. ~~Class 2, 3 and 4 s~~Stream buffers may be used for ~~regional retention/detention~~stormwater facilities when:
 - a. Authorized by the exemption process set out in IMC 18.10.400; and
 - b. All requirements of the City's currently adopted ~~Surface Water~~Stormwater Design Manual are met; and
 - c. ~~The use will not alter the rating or the factors used in rating the stream; and t~~There are no significant adverse impacts to the stream or its resources; and
 - d. The ~~retention/detention~~stormwater facilities shall not encroach into stream buffers by more than twenty-five (25) percent of the standard stream buffer width, per IMC 18.10.785, or use more than twenty-five (25) percent of the total buffer area without a variance; and
 - e. Any stream buffer area displaced by a stormwater ~~management~~ facility shall be compensated for by adding an equal stream buffer area in accordance with stream buffer averaging IMC 18.10.790(D)(6) so that no net loss of stream buffer area results from the construction of the facility. Stormwater vaults located in stream buffers shall have adequate soil cover to support native vegetation including small trees, shrubs and groundcover
 - f. Stormwater facilities such as bioretention, rain gardens, or constructed wetlands planted with appropriate native vegetation and trees are allowed without buffer averaging requirements.

4. Streams and buffers may be altered to remove exotic or invasive vegetation, and for restoration of floodplains and habitat, so long as the project will have no lasting adverse impacts that result from construction on any stream and all requirements of the City's currently adopted ~~Surface Water~~ Stormwater Design Manual and all other applicable codes are met.

Exhibit A5.e – Competing Needs with Special Zoning District

Chapter 18.07 Required Development and Design Standards

Add a new Section to read:

18.07.035 Stormwater LID Priority.

Where stormwater low impact development requirements compete with land use development standards the land use standards take precedence within the Central Issaquah Area, and on-site stormwater LID requirements take precedence in all other areas of the City. Provided that in the Central Issaquah Area stormwater LID requirements will be considered to the maximum extent [DF1]feasible.

Central Issaquah Development and Design Standards, Chapter 1.1.C Applicability

Amend 1.1.C Applicability, by adding paragraph 3 as follows:

C. Applicability. The Central Issaquah Development and Design Standards apply to Sites in Central Issaquah except those areas zoned Urban Village. The development and design standards for the areas zoned Urban Village are found in the applicable development agreement.

The purpose of this section is to allow the continued operation of existing uses and existing developments that were legally established when the Central Issaquah Plan became effective and to allow expansion of existing uses and developments that are consistent with the Development and Design Standards. In all cases the development shall strive to comply with the goals and policies of the Central Issaquah Plan.

1. These provisions shall apply to all Development and Redevelopment with the following exceptions listed below. Exceptions listed below shall comply to the fullest extent practical and feasible. Exceptions shall provide a schematic site plan showing build-out to achieve the Development and Design Standards including but not limited to schematic building locations; minimum FAR; water, sewer and storm routes and facilities; Circulation Facilities; and Critical Area designations and buffers. Modification of the proposed site plan may be required to reserve portions of the site to address these schematic infrastructures plans and buildings.

Exceptions:

- a. Change in Land Use categories in the Permitted Land Use Table;
- b. Change to the Building Code Occupancy categories;

c. Remodels, additions, alterations, etc., including change of tenants and tenant improvements, where construction costs are less than the Redevelopment threshold as established by Chapter 2.0 Definitions.

2. **Supplemental Provisions.** To the extent these standards do not establish Development and Design Standards, process, procedures, or other elements covering a certain subject, element or condition, Development shall be governed by the Issaquah Municipal Code and other City codes.

3. Stormwater LID Priority. Where stormwater low impact development requirements compete with land use development standards the land use standards take precedence within the Central Issaquah Area, and on-site stormwater LID requirements take precedence in all other areas of the City. Provided that in the Central Issaquah Area stormwater LID requirements will be considered to the maximum extent feasible.